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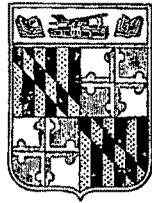
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CONTENTS OF VOLUME 103

JULY, 1946

PRESIDENTIAL ADDRESS. <i>Karl M. Bowman</i>	1
KARL M. BOWMAN, M. D. <i>Harry C. Solomon</i> ..	18
PSYCHOTHERAPEUTIC ASPECTS OF SYMPTOMATIC TREATMENT. <i>Major Jerome D. Frank</i>	21
THE RÔLE OF CONDITIONED RESPONSES IN EMOTIONAL DISTURBANCES OF WAR. <i>Norbert Bromberg</i>	26
A RAPID PERSONALITY EVALUATION. <i>Harry Grant</i>	33
PSYCHOSOMATIC DERMATOLOGICAL SYNDROMES IN MILITARY SERVICE. <i>Daniel J. Sullivan and Eugene S. Bereston</i>	42
WHY 2,276 AMERICAN SOLDIERS IN THE MEDI- TERRANEAN THEATER OF OPERATION WERE ABSENT WITHOUT LEAVE, DESERTED, OR MISBEHAVED BEFORE THE ENEMY. <i>Morse P. Manson and Harry M. Grayson</i>	50
RESIDUALS OF COMBAT INDUCED ANXIETY. <i>Charles O. Sturdevant</i>	55
ON ORIENTAL STOICISM. <i>Commander James Clark Moloney</i>	60
THE PSYCHOLOGIST'S CONTRIBUTION TO THE PSYCHIATRIC HOSPITAL. <i>Clarence O. Cheney and Edward I. Strongin</i>	65
PHYSICAL SIGNS OF SCHIZOPHRENIA. <i>Theophil Klingmann</i>	69
CEREBRAL LESION RESULTING IN SPATIAL DIS- ORIENTATION. <i>A. Z. Pfeffer, E. D. Fried- man, and S. Bernard Wortis</i>	72
CONDITIONED RESPONSE TO FELLATIO. <i>A. C. Cornsweet and M. F. Hayes</i>	76
THE SELECTEE AND HIS COMPLAINTS. <i>William Rottersman</i>	79
PSYCHONEUROTICS IN COMBAT. <i>Lt. Col. Marvin R. Plesset</i>	87
A REPORT ON THE USE OF THE WECHSLER- BELLEVUE SCALES IN AN OVERSEAS GEN- ERAL HOSPITAL. <i>Morton I. Teicher and Erwin Singer</i>	91
AUTO-FELLATIO. REPORT OF A CASE. <i>Morris M. Kessler and George E. Poucher</i>	94
PERSONAL PROBLEMS RELATED TO ARMY RANK. <i>Jerome D. Frank</i>	97
THE PSYCHOPATHIC PERSONALITY. THE ROR- SCHACH PATTERNS OF 28 CASES. <i>Keith D. Heuser</i>	105
CLINICAL NOTES: A VETERAN USES GENERAL SEMANTICS FOR REHABILITATION.....	113
CORRESPONDENCE	116
AWARDS AND CITATIONS IN NEUROPSYCHIATRY. SUPPLEMENTARY LIST.	118
COMMENT: The Chicago Meeting, 123. A Glimpse Be- hind the Curtain. Genetics in the U.S.S.R.	125

NEWS AND NOTES:

The Western State Psychiatric Institute and Clinic, Pittsburgh, Pa., 127. International Congress on Mental Deficiency, 127. Biological Photographic Association, 127. New York Psychoanalytic Society, 128. The Seton Institute, 128. The Langley Porter Clinic Refresher Course, 128. Expansion of Child Guidance Clinics in New York State, 128. Psychiatric Education at Long Island College of Medicine, 128. Psychiatric Nursing Institute, 129. Philadelphia Psychoanalytic Society, 129. Student Social Work Aides, New York, 129. Psychiatry in Korea, 129. Wayne University College of Medicine, 130. Electroshock Research Association, 130. Appointments to N. Y. State Department of Mental Hygiene, 130. National Institute of Social Relations, 130. Court Psychiatric Clinics Conference, 131. Third International Congress of Anthropological and Ethnological Sciences, 131. The American College of Physicians, 131. New Directory of Psychiatric Clinics, 131. The National Committee for Mental Hygiene, 132. Diplomates Certified by the American Board of Psychiatry and Neurology, Inc., Chicago, May 24 and 25, 1946, 132. Diplomates Certified by the American Board of Psychiatry and Neurology, Inc., San Francisco, June 25, 1946, 134.

BOOK REVIEWS:

Will Therapy and Truth and Reality. *Otto Rank*

Human Constitution in Clinical Medicine. *G. Draper, C. W. Dupertuis and J. L. Caughey, Jr.*

National Health Agencies. A Survey with Especial Reference to Voluntary Associations. *Harold M. Cavins*.....

Men Under Stress. *Roy R. Grinker and John P. Spiegel*

The 1945 Year Book of Neurology, Psychiatry and Endocrinology.....

War Neuroses. *Roy R. Grinker and John P. Spiegel*

New Goals for Old Age. *George Lawton, Editor*

A Handbook of Psychiatry. *Louis J. Karnosh and Edward M. Zucker*.....

Rypins' Medical Licensure Examinations. *W. L. Bierring, Editor*.....

IN MEMORIAM:

Walter Edward Dandy. *J. C. W.*.....

SEPTEMBER, 1946

PSYCHIATRY IN INDUSTRY. <i>Frederick W. Dershimer</i>	145
CURRENT TRENDS IN INDUSTRIAL PSYCHIATRY. <i>Leonard E. Himler</i>	149
EPILEPSY. TREATMENT WITH NEW DRUG: PHENANTOIN. <i>Harry L. Kozol</i>	154
TWO NEW DRUGS IN EPILEPSY THERAPY. <i>William G. Lennox</i>	159
FURTHER OBSERVATIONS ON THE USE OF TRIDIONE IN THE CONTROL OF PSYCHOMOTOR ATTACKS. <i>Russell N. DeJong</i>	162
INCIDENCE OF NEUROPSYCHIATRIC DISEASE IN THE DEMOBILIZED VETERAN. <i>Irving F. Burtoa, Merrill T. Eaton, Jr., and Herbert G. McMahan</i>	165
REHABILITATION OF MILITARY OFFENDERS AT THE NINTH SERVICE COMMAND REHABILITATION CENTER. <i>Major Isidore I. Weiss</i> ..	172
A STUDY OF THE MODIFICATION OF MENTAL ILLNESS BY INTERCURRENT PHYSICAL DISORDERS IN 100 PATIENTS. <i>Hollis E. Clow and Curtis T. Prout</i>	170
NAIL BITING. INCIDENCE, ALLIED PERSONALITY TRAITS AND MILITARY SIGNIFICANCE. <i>Joel Milam Hill</i>	185
A PSYCHOSOMATIC APPROACH TO THE PROBLEM OF STUTTERING IN PSYCHOTICS. <i>Dominick A. Barbara</i>	188
COMPARATIVE INCIDENCE OF NEUROPSYCHIATRIC CASUALTIES IN WORLD WAR I AND WORLD WAR II. <i>John W. Appel, Gilbert W. Beebe and David W. Hilger</i>	196
PSYCHIATRY IN HANFORD. <i>Walter A. Noehren</i> ..	200
MEN WITH BRAIN DAMAGE. <i>John A. Aita</i>	205
JAPANESE MILITARY PSYCHIATRY IN KOREA. <i>Milton Miles Berger</i>	214
PREFRONTAL LOBOTOMY. A PRELIMINARY APPRAISAL OF THE BEHAVIORAL RESULTS. <i>Ward C. Halstead, Hugh T. Carmichael and Paul C. Bucy</i>	217
TRANSITORY SCHIZOPHRENIAS PRODUCED BY BROMIDE INTOXICATION. <i>Max Levin</i>	229
ORBITAL CORTEX SYNDROME FOLLOWING LEUCOTOMY. <i>F. Reitman</i>	238
IRRELEVANT AND METAPHORICAL LANGUAGE IN EARLY INFANTILE AUTISM. <i>Leo Kanner</i> ..	242
GLUCOSE TOLERANCE IN CHRONIC ALCOHOLISM. <i>Samuel C. Karlan and Clarence Cohn</i>	247
REPORTS OF COMMITTEES	249
CORRESPONDENCE	270

COMMENT:

The National Society for Medical Research, 273. The Medical Center for Children, Boston, 273. Dr. Cheney retires, 274. President Hamilton Honored, 275. Dr. Adolf Meyer's Eightieth Birthday, 275.

NEWS AND NOTES:

Dr. Sleeper heads Augusta State Hospital, 276. School of Applied Psychoanalysis, 276. Dr. Wall heads New York Hospital, Westchester Division, 276. American Group Therapy Association, 276. American Book Center for War Devastated Libraries, Inc., 276. Veterans Administration Mental Health Policy, 277. Treatment of Emotionally Disturbed Children, Illinois, 277. American Board of Psychiatry and Neurology, 277. American Occupational Therapy Association, 277. Ohio's Mental Health Program, 278. Louis Gross Memorial Lecture, 278. Research Positions at Western State (Pa.) Psychiatric Institute, 278. Salmon Lectures, 1946, 278. Mental Hygiene Society, Hawaii, 278. Association for Research in Nervous and Mental Disease, 279.

BOOK REVIEWS:

The Unknown Murderer. *Theodor Reik*.... 280
 What People Are—A Study of Normal Young Men. *Clark W. Heath, et al.*..... 280
 Alcohol, Science and Society: Twenty-Nine Lectures with Discussions as Given at the Yale School of Alcohol Studies..... 281
 Outline of Psychiatric Case Study, 2d Ed. *Paul William Prenz*..... 282
 Everyday Psychiatry. *John D. Campbell*.... 282
 The Psychological Frontiers of Society. *Abram Kardiner, et al.*..... 283
 A Assistência a Psicopatas no Estado de São Paulo. *A. C. Pacheco e Silva*..... 284
 Patients Have Families. *Henry B. Richardson*

IN MEMORIAM:

Jacob S. Kasanin, 1897-1946. *David Rothschild*

NOVEMBER, 1946

A HISTORY OF THE DEVELOPMENT OF THE CONCEPT OF FUNCTIONAL NERVOUS DISEASE DURING THE PAST 2500 YEARS. <i>A. Warren Stearns</i>	289
THE GENETIC THEORY OF SCHIZOPHRENIA. <i>Franz J. Kallmann</i>	309
FAMILY MENTAL DISEASE IN PRIVATE PRACTICE. <i>Abraham Myerson</i>	323

INSULIN THERAPY AND ITS FUTURE. <i>Earl D. Bond and Jay T. Shurley</i>	338
JAPANESE NEUROPSYCHIATRY. <i>Col. Henry A. Cotton, Jr., and Col. Franklin G. Ebaugh</i> ..	342
AN IMPROVED INSTRUMENT FOR THE DETERMINATION OF CHANGES IN THE PAIN THRESHOLD CAUSED BY DRUGS. <i>Frederick B. Flinn and A. S. Chaikelis</i>	349

ART IN THE HISTORY OF MEDICINE. THE 16TH CENTURY CURES FOR LUNACY. <i>Clements C. Fry</i>	351
A COMPARISON BETWEEN THE NEUROPSYCHIATRIC SCREENING ADJUNCT (NSA) AND THE CORNELL SELECTEE INDEX (FORM N). <i>Captain Harry C. Leavitt</i>	353
PERSONALITY STUDIES IN MENOPAUSAL WOMEN. <i>Karl Siern and Miguel Prados</i>	358
PSYCHIATRIC FACTORS IN MEDICAL STUDENTS WHO FAIL. <i>R. W. Waggoner and Thornton Woodward Zeigler</i>	369
A PSYCHIATRIC SCREENING AID FOR PRE-COMBAT TROOPS. <i>Lt. Col. Oscar B. Markey and First Lt. Miles M. Zisson</i>	377
PROCEEDINGS OF SOCIETIES: PROCEEDINGS OF THE ONE HUNDRED AND SECOND ANNUAL MEETING OF THE AMERICAN PSYCHIATRIC ASSOCIATION	381
COMMENT: The National Mental Health Act, 417. "It Can't Happen Here," 420.	
NEWS AND NOTES: The Program for the 1947 Meeting, 422. Residency in Neuropsychiatry, Veterans Administration, Los Angeles, 423. North Pacific Society of Neurology and Psychiatry, 423. News Letter, 423. Pennsylvania Psychiatric Society, 423. The Helen Putnam Fellowship for Advanced Research in Genetics and Mental Health, 424. The Central Neuropsychiatric Association, 424. Los Angeles Psychiatric Service, 424. School Psychologist, New York City, 424. Seventh Conference on Science, Philosophy and Religion, 424. Southern Psychiatric Association, 425. Institute of General Semantics, New Headquarters, 425. Congress of Correction, Detroit, 1946, 425. Canadian Penal Congress, Windsor, 425. The Rockefeller Foundation Annual Report, 425. Mental Hygiene Appointments, Ohio, 426. Prize Contest, 426. Lasker Awards, 1946, 426. American Physicians' Literary Guild Award, 426. Lectures on Mental Hygiene, Philadelphia, 427.	
BOOK REVIEWS: The Neurologist's Point of View. <i>I. S. Wechsler</i>	428
A Psychiatric Primer for the Veteran's Family and Friends. <i>Alexander G. Dumas and Grace Keen</i>	429
Emotional Problems of Living. <i>O. Spurgeon English and Gerald H. J. Pearson</i>	429
The Clinical Application of the Rorschach Test. <i>Ruth Bochner and Florence Halpern</i>	429
Young Man, You Are Normal. <i>Earnest Hooton</i>	430
IN MEMORIAM: Norman Grant Tufford. <i>John M. Dorsey</i> ...	432

JANUARY, 1947

LETTER FROM FRANCE. <i>P. Cossa</i>	433
ALUMNI APPRAISAL OF PSYCHIATRIC EDUCATION. <i>William C. Porter and Henry A. Davidson</i>	440
PSYCHIATRY IN MEDICAL EDUCATION: THE TEACHER-CHARACTERISTICS AND QUALIFICATIONS. <i>John C. Whitehorn</i>	446
WHAT SHOULD BE TAUGHT. <i>Nolan D. C. Lewis</i>	450
THE GENETICS OF EPILEPSY. <i>William G. Lennox</i>	457
THE NEUROPSYCHIATRIC PROGRAM OF THE VETERANS ADMINISTRATION. <i>Daniel Blain and John H. Baird</i>	463
CARE AND TREATMENT OF THE PSYCHIATRIC PATIENT IN THE VETERANS ADMINISTRATION. <i>Harvey J. Tompkins and Alfred W. Snedeker</i>	467
THE NEUROPSYCHIATRIC TRAINING PROGRAM OF THE VETERANS ADMINISTRATION. <i>Florence Powdermaker</i>	470
THE NEW RÔLE OF PSYCHOLOGICAL TESTING IN PSYCHIATRY. <i>Karl Menninger, David Rapaport and Roy Schafer</i>	473
THE PSYCHOANALYTICAL APPROACH TO THE MASCULINE AND FEMININE PRINCIPLES IN MUSIC. <i>Margaret Tilly</i>	477
DILANTIN TREATMENT FOR BEHAVIOR PROBLEM CHILDREN WITH ABNORMAL ELECTROENCEPHALOGRAMS. <i>Charlotte F. Walker and Barbara B. Kirkpatrick</i>	484
RACIAL ASPECTS OF EMOTIONAL PROBLEMS OF NEGRO SOLDIERS. <i>Rutherford B. Stevens</i> ..	493
MENTAL ILLNESS AMONG NEGRO TROOPS OVERSEAS. <i>Lt. Col. Herbert S. Ripley and Major Stewart Wolf</i>	499
REVIEW OF PSYCHIATRIC PROGRESS 1946: Heredity and Eugenics. <i>Franz J. Kalbfleisch</i> ..	513
Neuropathology, Biochemistry and Endocrinology. <i>Orthello Langworthy and John C. Whitehorn</i>	515
Electroencephalography. <i>Frederic A. Gibbs</i> ..	519
Epilepsy. <i>William G. Lennox and Jean P. Davis</i>	522
Neurosyphilis. <i>Augustus S. Rose and Harry C. Solomon</i>	524
Alcohol. Geriatrics. <i>Karl M. Bowman</i>	528
Child Psychiatry. Mental Deficiency. <i>Leo Kanmer</i>	530
Psychometrics. <i>F. L. Wells</i>	532
General Clinical Psychiatry, Psychosomatic Medicine and Psychosurgery. <i>Nolan D. C. Lewis</i>	535
Physiological Treatment of Psychoses. <i>Joseph Wortis</i>	538
Family Care and Out-Patient Mental Clinics in 1946. <i>Horatio M. Pollock</i>	542
Psychiatric Nursing. <i>Mary E. Corcoran</i>	544
Psychiatric Social Work. <i>Thomas A. C. Rennie</i>	545
Occupational Therapy. <i>Lawrence F. Woolley</i>	547

Psychiatry in Industry. <i>C. C. Burlingame</i> ...	549	cational School, 565. Dr. Levine Appointed at University of Cincinnati, 565. Veterans Administration Training Courses, 565. American Society of Electroencephalography, 566. Psychiatric Placement Service to Be Continued, 566. Physicians Certified by The American Board of Psychiatry and Neurology, Inc., New York City, December 16, 17, 18, 1946, 567.
Administrative, Forensic and Military Psychiatry. <i>Winfred Overholser</i>	553	
Psychiatric Education. <i>Charles A. Rymer</i> ...	556	
AWARDS AND CITATIONS.....	560	
AMENDMENT TO CONSTITUTION.....	562	
COMMENT:		
Letter from France, 563. The Psychiatric Foundation, 563.		
NEWS AND NOTES:		BOOK REVIEWS:
Council Meeting, American Psychiatric Association, 564. Group for the Advancement of Psychiatry, 564. The Menninger Foundation, 564. Medico-Legal Relations, 565. Building and Improvements, N. Y. State Hospitals, 565. American Board of Psychiatry and Neurology Examinations, 565. Opening for Psychiatrist in Boys Vo-		Crime and the Human Mind. <i>David Abrahamson</i>
		Psychiatric Aspects of Modern Warfare. <i>R. S. Ellery</i>
		The Falling Sickness. <i>Owsei Temkin</i>
		Character Analysis. <i>Wilhelm Reich</i>
		The Sexual Revolution. <i>Wilhelm Reich</i>
		The Person in the Body. <i>Leland F. Hinsie</i> ..

MARCH, 1947

PSYCHIATRIC EXPERIENCE IN THE WAR, 1941-1946. <i>Brig. General William C. Menninger</i>	577	A PROGRAM FOR TRAINING ATTENDANTS IN MENTAL HOSPITALS. <i>Laura W. Fitzsimmons and Charles P. Fitzpatrick</i>	685
PSYCHIATRIC LESSONS FROM WORLD WAR II. <i>Captain Francis J. Braceland</i>	587	BRAIN METABOLISM IN MAN: UNANESTHETIZED AND IN PENTOTHAL NARCOSIS. <i>William A. Himwich, Edmund Homburger, Robert Maresca and Harold E. Himwich</i>	689
ACCOMPLISHMENTS OF PSYCHIATRY IN THE ARMY AIR FORCES. <i>Col. John Milne Murray</i>	594	EMOTIONS IN THE ALLERGIC INDIVIDUAL. <i>Frank C. Metzger</i>	697
PSYCHIATRY IN PROSPECT. <i>Medical Director Robert H. Felix</i>	600	PSYCHOLOGICAL FACTORS IN MEN WITH PEPTIC ULCERS. <i>Frederic T. Kapp, Milton Rosenbaum and John Romano</i>	700
PSYCHIATRIC CASUALTIES IN SUBMARINE WARFARE. <i>Ivan F. Duff and C. W. Shilling</i>	607	THE PSYCHIATRIC RESOURCES OF NEW YORK. <i>S. Bernard Wortis and Morris Herman</i> ...	705
THE PARANOIAC OFFICER AND THE OFFICER PARANEE. <i>Harold Rosen and Hugh E. Kiene</i>	614	COMMENT:	
PRAGMATIC PSYCHOTHERAPY IN MILITARY TRAINING CENTERS. <i>Bernard A. Cruvant</i> ...	622	A Word from the President. <i>Samuel W. Hamilton</i>	709
THE USE OF HYPNOSIS IN THE TREATMENT OF ACUTE COMBAT REACTIONS. <i>Capt. Fred D. Kartchner and Lt. Ija N. Korner</i>	630	NEWS AND NOTES:	
EXPERIENCE WITH GROUP PSYCHOTHERAPY AS A METHOD OF TREATMENT FOR VETERANS. <i>Martin Grotjahn</i>	637	Psychiatric Posts Available in Georgia, 710. Openings in Psychiatry and Psychology, New York State Department of Mental Hygiene, 710. Conference of Western State Psychiatric Institute and Clinic, 710. Consulting Psychiatrist, 710. International Congress of Genetics, 710. Rehabilitation Conference, 710. Neuropsychiatric Consultants, Office of the Surgeon General, 710. Residency in Neuropsychiatry, 710. Annual Meeting National Committee for Mental Hygiene, 711. Army Medical Library Microfilm Service, 711. Grants under National Mental Health Act, 711. Psychiatrist, Veterans Administration, 712. Sociatry, 712. Army Medical Films, 712. European Manuscripts of Medical and Related Research, 712. Appointment of Hester B. Crutcher to U. S. P. H. S., 712. Testimonial Dinner for Dom. Thomas Verner Moore, 713. Pi Lambda Theta Awards, 713. Rorschach Courses at Michael Reese Hospital, 713.	
THE UTILIZATION OF A THERAPY GROUP IN TEACHING PSYCHOTHERAPY. <i>Samuel B. Hadden</i>	644		
THE USE OF PRIVATE PATIENTS FOR PSYCHIATRIC TEACHING IN A MEDICAL SCHOOL. <i>Titus H. Harris and John L. Otto</i>	649		
PSYCHOTHERAPY FOR THE GENERAL PRACTITIONER: A PROGRAM FOR TRAINING. <i>Thomas A. C. Rennie</i>	653		
THE HOMOSEXUAL WOMAN. <i>Jane MacKinnon</i>	661		
THE USE OF ELECTRIC SHOCK THERAPY IN PSYCHONEUROSIS. <i>Donald M. Hamilton</i> ..	665		
AN EVALUATION OF SHOCK THERAPY. <i>Leon Salzman</i>	669		
EFFECTS OF ELECTRICALLY INDUCED CONVULSIONS UPON RESPIRATION IN MAN. <i>Mark D. Altschule, Wolfgang M. Sulzbach and Kenneth J. Tillotson</i>	680		

REPORT OF THE NOMINATING COMMITTEE..... 713
BOOK REVIEWS:

- The Role of the Aged in Primitive Society.
Leo W. Simmons..... 714
- Practical Neurological Diagnosis. *R. R. Glen Spurling, M.D.*..... 715
- Modern Attitudes in Psychiatry. (The March of Medicine, 1945)..... 715
- Fundamental Patterns of Maladjustment. The Dynamics of Their Origin. *Lester Eugene Hewitt and Richard L. Jenkins*... 716
- The Family from Institution to Companionship. *Ernest W. Burgess and Harvey J. Locke* 716
- Correctional and Rehabilitation Work, Reformatory School, Lucknow; 2. Correc-

- tional and Rehabilitation Work, Juvenile Jail, Bareilly; 3. Schemes for Delinquency and Its Correction; Prevention and Correction of Delinquency, Mental Disorder and Mental Deficiency; A Few Suggestions Regarding Adult Crime. *Lt. Col. A. H. Shaikh*..... 716
- Psychosomatic Diagnosis. *Flander Dunbar, M.D., Med. Sc. D., Ph.D.*..... 717
- How Heredity Builds Our Lives. *Robert Cook and Barbara Burks*..... 719
- The Psychology of Seeing. *Herman F. Brandt, Ph.D.* 720
- The Individual in Simpler Forms. *Arthur Russell Moore* 720

MAY, 1947

- ADDICTION: SOME THEORETICAL CONSIDERATIONS AS TO ITS NATURE, CAUSE, PREVENTION AND TREATMENT. *J. D. Reichard*.... 721
- THE USE OF AMINOPHYLLINE IN NEUROPSYCHIATRIC DISORDERS ASSOCIATED WITH CEREBRAL ARTERIOSCLEROSIS AND HYPERTENSIVE ENCEPHALOPATHY. *Hans H. Reese and Fritz Kant*..... 731
- PSYCHIATRIC SYNDROMES IN PATIENTS WITH ORGANIC BRAIN DISEASE. I. DISEASES OF THE BASAL GANGLIA. *Charles Brenner, Arnold P. Friedman and H. Houston Merritt* 733
- THE EFFECT OF ANOXIA AS MEASURED BY THE ELECTROENCEPHALOGRAM ON PSYCHONEUROTIC PATIENTS. *Jacob E. Finesinger, Erich Lindemann, Mary A. Brazier and Eliot D. Chapple*..... 738
- ELECTROENCEPHALOGRAPHIC PATTERNS FROM THE BASE OF THE BRAIN. *Milton Greenblatt, Daniel Funkenstein, Daniel Miller and Max Rinkel*..... 749
- A STUDY OF THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY IN CLINICAL PRACTICE. *Herbert C. Modlin*..... 758
- RORSCHACH'S TEST AS A DIAGNOSTIC AID IN BRAIN INJURY. *John A. Aita, Ralph M. Reitan and Jane M. Ruth*..... 770
- SITUATIONAL AND ATTITUDINAL INFLUENCES ON RORSCHACH RESPONSES. *Abraham S. Luchins* 780
- PRELIMINARY TEST OF INTELLIGENCE. A BRIEF TEST OF ADULT INTELLIGENCE DESIGNED FOR PSYCHIATRIC EXAMINERS. *Margaret Keller, Irvin L. Child and Frederick C. Redlich* 785
- AN EXPERIMENTAL STUDY OF MENTAL PATIENTS THROUGH THE AUTOKINETIC PHENOMENON. *Albert C. Voth*..... 793
- BRIEF PSYCHOTHERAPEUTIC INTERVIEWS IN THE TREATMENT OF EPILEPSY. *Oskar Diethelm*. 806
- STATE HOSPITAL SCHOOL FOR EPILEPTIC CHILDREN. *R. L. Dixon*..... 811

- THE USE OF RESIDENCE IN PSYCHIATRIC TREATMENT WITH CHILDREN. *J. Franklin Robinson* 814
- INSTITUTIONAL TREATMENT OF JUVENILE DELINQUENTS. *Leonard M. Dub*..... 818
- STUDIES IN PRIMARY BEHAVIOR DISORDERS AND PSYCHOPATHIC PERSONALITY. II. THE INHERITANCE OF ELECTROCORTICAL ACTIVITY. *Jacques S. Gottlieb, M. Coulson Ashby and John R. Knott*..... 823
- HERPES SIMPLEX AND SECOND DEGREE BURN INDUCED UNDER HYPNOSIS. *Montague Ullman* 828
- PHOBIA AS A SYMPTOM IN HYPERTHYROIDISM. *Bernard J. Ficarra and Ralph A. Nelson*.. 831
- CASE REPORTS:
- A Case of Atabrine Psychosis in a Civilian. *Felix H. Ocko*..... 833
- Shock Therapy in Psychoses During Pregnancy. *Carrol C. Turner and Leonard D. Wright* 834
- COMMENT:
- Pierre Janet, 837. UNESCO and The American Psychiatric Association, 838.
- NEWS AND NOTES:
- Veterans Administration News, 839. Veterans Administration Neuropsychiatric Service, 839. Paraplegia Centers under Veterans Administration, 839. American Occupational Therapy Association, National Convention, 840. Lasker Award, 1947, 840. Salary Rates in Social Work, 840, The Austen Riggs Foundation, 840. Psychiatrist, Portland Child Guidance Clinic, 840. Psychiatric Developments in California, 840. Alcohol Studies, Cornell University Medical College, 841. Mental Hygiene in Buenos Aires, 841. Panamerican Medical Confederation, 841. American Journal of Occupational Therapy, 842. Residencies, Pratt Diagnostic Hospital, 842. Blind Veterans under Veterans Administration, 842. Children's Bureau Conference on Cerebral Palsy, 842. Suggested 3-Year Full-Time Training Program for Psychiatrists, 843.

BOOK REVIEWS:

Agnosia, Apraxia, Aphasia, Their Value in Cerebral Localization. <i>J. M. Nielsen</i>	844
Science for Democracy. <i>Jerome Nathanson, Editor</i>	844
Hypnoanalysis. <i>Lewis R. Wolberg</i>	845
Modern Psychiatry. <i>William S. Sadler</i>	846
Psychology for Nurses, <i>Bess V. Cunningham</i>	846
The Care of the Aged (Geriatrics). <i>Malford W. Thewlis</i>	846

Problems in Prejudice. <i>Eugene Hartley</i>	847
Non-Projective Personality Tests. <i>Harold A. Abramson and others</i>	847
The Jehovah's Witnesses. <i>Herbert Hewitt Stroup</i>	847
People in Quandaries. <i>Wendell Johnson</i>	848
Thirty-Second Annual Report of the Municipal Court of Philadelphia for 1945....	849
ANNUAL INDEX.....	850



Karl M. Bowman

PRESIDENTIAL ADDRESS¹

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Two years ago at our last annual meeting we celebrated the passing of one hundred years since the founding of The American Psychiatric Association. We looked back and reviewed past achievements. We were all justly proud of our Association, the oldest national medical society in the United States. Today at the first annual meeting in our second century of existence, let us look forward and consider what should be the future development of psychiatry.

There are certain things which I believe we should agree upon as the basis for future development. The first of these is the establishment of a simple credo to which we can all subscribe, and which we can present as a simple statement of the fundamentals of psychiatry. We recognize that there are many differences of opinion in psychiatry. A certain amount of disagreement is a sign of healthy growth. Although we have some fairly fundamental differences among ourselves, I believe that we can agree upon a simple statement of the fundamentals of psychiatry. This should be presented to the medical profession and to the general public as a basis upon which we ask for outside support.

Psychiatry is a specialty of medicine; as such it is concerned primarily with the problem of mental health and mental disease. Like other branches of medicine it has started by recognizing serious disorders; has attempted to find their causes; has developed more or less successful methods of treatment; has then turned to disease prevention, and has finally advanced to the concept of robust health as a goal for which all medicine must work.

The mere absence of clear-cut mental disorder in people is not enough. We want the optimum of mental health for everyone. As psychiatry has progressed it has not only infiltrated every other field in medicine, but

has entered upon the study of the fundamental bases of man's behavior. It has recognized that man is a social being, and has therefore spread into such fields as cultural anthropology, sociology, political science, law and religion. Psychiatry has much to learn from all of these fields, and in turn can contribute to them much that will be helpful.

Many schools of religious education have courses in psychiatric work. Our most progressive courts make use of psychiatrists both to examine those charged with crime prior to trial to determine their mental responsibility, and to study those convicted to develop constructive methods of dealing with them. The latest works in cultural anthropology are replete with psychiatric material. We find, therefore, considerable acceptance of our fundamental psychiatric concepts by these many other fields of study.

At the moment we have popular acceptance of psychiatry and keen interest in it; in fact, one might almost say that psychiatry is oversold, and is in the embarrassing position of being called upon to perform miracles which unfortunately can occur only in some of the absurd formulations in popular moving pictures and novels. It is perhaps well to call public attention to the fact that we have not yet solved the problem of mental disease; that we have made only a very modest beginning, but that within certain limits we can accomplish a great deal. There is danger that by expecting too much of us the public may react and decide that because psychiatry cannot prevent and cure all mental disorders, it therefore has no value and should be discarded.

Remember that following World War I there was a similar flood of popular interest in psychiatry, and a rather general assumption that psychiatry could now solve all human problems. When, as was to be expected, psychiatry failed to measure up to this impossible standard, much antagonism arose, and many claimed that psychiatry had little or nothing to offer. Let us, therefore,

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go ahead making no exaggerated claims for psychiatry, but presenting the facts as simply and clearly as possible.

I think we can start with the fundamental assumption that man is an organism; that he can be studied by all of the methods employed in studying other organisms, and that much about his behavior can be understood by such studies. It is true, of course, that there are other methods of approach, and that this is not the only method of study. Man can only be understood as a social being living in relationship to his fellowmen, and in a culture which has a good deal to do with his attitudes and behavior. However, as psychiatrists we are concerned with man both as an individual and as a member of society. We are specifically concerned with the mental health of the individual, and we can postulate that one of the most essential requirements for a healthy society is that it be composed of mentally healthy individuals. Our problem is primarily man's ability to live in harmony with his fellowman.

We believe that there is a science of human behavior; that it is possible to understand the causes of good and bad adjustment; that within limits personality can be altered; that it is possible to discover the causes of mental disease, mental defects and maladjustment, and then to either largely prevent or successfully treat them. We know that the structure of personality is laid down during the first few years of life, and we are only beginning to understand how it is possible to develop more healthy personalities by a more healthy life during infancy.

Good mental health depends on such variables as one's heredity, diet, friends and enemies. It is influenced by both the physical and the emotional climate in which one lives. At times we have seized upon a single factor and attributed all responsibility to it. It is necessary to realize how extremely complicated are the human organism and human behavior, and that only a study of the multiplicity of factors involved can give us any true understanding of our problems. We know that a large percentage of our attitudes and behavior is determined by the group in which we live. Prejudice and

bigoted attitudes are influenced by the group with which we identify ourselves.

Good physical health is desirable and promotes good mental health, although it is possible for an ideal state of mental adjustment to be attained by persons who suffer from physical handicaps or serious disease. Aside from this important factor of physical health, the child's mental health depends primarily on his relationship with his family and playmates. In general, he should be able to compete on equal terms with the majority of his associates, otherwise he may require special help and assistance to bridge this gap. Thus it is seen that certain conditions promote good mental health, whereas other conditions might cause serious maladjustment unless overcome by special care and treatment.

A child should not feel himself too different from those about him. If possible he should be able to achieve superiority in some particular field. This will depend of course upon his own capacities and desires, but it is possible for almost every person to find something which he can do unusually well, and which consequently yields him a healthy emotional satisfaction.

We must recognize what we are trying to accomplish by child training. We are all too prone to think of the child as an irritating incident in our lives, and to feel that if we can prevent him from annoying and disturbing us we have thereby achieved a satisfactory solution. Much poor mental health and maladjustment during childhood and later results from this attitude. Our purpose in training the child should rather be to help him develop normally and to prepare him to deal with life at what is called an adult level. In the process of developing through childhood and adolescence, the human being of necessity will experience much conflict and turmoil. He will require help and guidance, and will often be a burden and a source of worry to those responsible for him. To the parent, the teacher and society in general he may be an upsetting, disturbing, troublesome person. It should be emphasized that since the healthy normal child is full of interest, energy and curiosity, his tendency to get into trouble is often the

sign of a healthy personality. We should be concerned rather with the child who is too submissive, who is inadequate, who never causes trouble. Such symptoms are frequently signs of a serious maladjustment. It is important, therefore, that parents, teachers and others who guide the individual during his development be intelligent, understanding and sympathetic.

It is most important that the child develop and retain an inner feeling of self respect. No person who has had this feeling killed within him will be a desirable member of the society which we wish to have in the future. Many political and religious philosophies seek to break the will of the individual, and force his compliance with doctrines which permit a few select persons to dominate and exploit him. This is neither the kind of society which we wish to see organized, nor the type of society in which the individual will achieve the maximum amount of mental health.

The culture in which we live has a conventional code, much of which is incorrect. Instead of acquainting the individual with realities, with the problems, difficulties and ways of dealing with the facts of life, our conventional pattern avoids unpleasant truths or even denies their existence. Our society has often sheltered the child under the misguided notion that the longer he can be prevented from knowing the unpleasant truths in the world the better for him and for society. It has even gone so far at times as to prevent him from ever finding out the harsh facts. We, as psychiatrists, have at times been guilty of under-estimating the ability of the average child to tolerate severe strain and stress, and we have failed to recognize that exposure to strains, if properly controlled, may aid in the development of a better integrated and more stable personality.

The way in which young children have been able to tolerate bombings and other hardships, should cause us to re-evaluate our concepts. The way the eighteen and nineteen year old boys have gone through the hardships and fighting at the front, indicates that they have more capacity for adjustment to difficulties than was realized. We know now that the longer we delay

meeting difficult problems the harder it is to deal with them. If certain situations are handled easily and naturally during childhood, the individual adjusts to them without much difficulty. If kept from the knowledge of these situations until he has grown up, and if forced then to deal with them, the struggle may be too much for him. The problem is not how we can shelter children, but how we can develop robust personalities so that they themselves can deal with the difficulties and dangers of life as they grow up.

We hear continually about the need of security. This concept holds much danger, since there is no such thing as complete security in this world. Although in the early developmental years it is important to give a feeling of security to the child, from then on he must be taught not the mistaken notion that he is secure but how to live in an insecure world. We should aim to develop personalities capable of dealing with all situations and able to bear stress and strain, rather than to create a social organization which relieves individuals of all necessity for strength of character and feeling of responsibility.

Unfortunately at the present time the idea is growing that the Government is responsible for everything, and that we have no responsibility either for our own condition or for that of our fellowman. Such a philosophy will inevitably lead to a type of collectivism in which a limited few will dominate the behavior and thinking of the many. This trend is neither new nor progressive. Actually it is a regressive tendency; a return to a more primitive and archaic social organization, which will inevitably lead to the same injustice, tyranny and suffering which have existed recently in Germany and Italy. In spite of this many persons of the so-called intelligentsia wish to develop this type of organization, and cannot see what the consequences will be.

Psychiatry has much to offer the world at this time. It can point out that the present suspicion and sensitivity among nations is in many ways comparable to that among individuals; that building up the mental health of individuals is the best way

to build up national health, and that psychiatry can be of assistance in this.

There are those who say that Germany and Japan are hopelessly militaristic, but there are some nations which have been extremely militaristic in the past but have changed. The old Norsemen were as pronounced an example of militarism as ever existed, but in only a few hundred years Denmark, Sweden and Norway have developed a non-militaristic type of culture which ranks among the highest of any of the cultural patterns in the world.

It is possible to alter cultural patterns and often very rapidly. Our own country is a classical example of this. We have had several rapid reversals in our attitude regarding pacificism. Also, there has been a marked change in the cultural attitude concerning women smoking. Thirty years ago women did not smoke in public and any woman doing so immediately stamped herself as of questionable reputation. Today cigarette smoking has become so much a feminine characteristic it is reported that in some colleges certain fraternities have forbidden the smoking of anything but cigars or pipes, because they feel that cigarette smoking is effeminate. This is also true with regard to women's drinking and wearing male attire. It has become so common for women to wear male clothing that it would probably be difficult to enforce any of the laws which are still on our statute books regarding the subject. On the other hand the attitude against the wearing of women's attire by men has persisted unchanged.

In any attempt to build a culture in which man can get along with his fellowman and in which war will not be acceptable, certain concepts are fundamental. These, as I have stated before, are that any nation or culture is a collection of individuals, and depends upon the mental health and mental attitudes of these individuals for a healthy cultural pattern; that our first problem is suitable education of children, and that we must teach children to think clearly and logically, to face reality and to try to deal honestly and frankly with their problems. The late Edward Filene once considered establishing an endowment to teach people how to think

clearly and accurately. He stated that he felt that this was one of the most important things to be done, but that he did not quite see a feasible way of accomplishing it. He also stated that he felt that there would be so much resistance on the part of certain groups in organized big business and organized religion, that it was an almost impossible task.

Today the child is usually shielded from unpleasant truths. Neurotic parents perpetuate their own inadequacies and their own inability to face the world in the lives of their children, and do not teach them to face facts squarely. Our modern culture has tried to bring up children without their ever having witnessed a birth or a death.

We have to a considerable degree, a cultural schizophrenia which tries to avoid the unpleasant problems of the world by denying their existence. At the present moment when the threat of the atom bomb is such that even the complete annihilation of the world is a possibility, there is a very considerable percentage of individuals who insist that it is childish to be concerned.

In general, we have a common basis for understanding the development of the child. Tension from outside forces should not be removed completely, nor on the other hand should there be too much. There should be the exact amount for each child which will most fully develop his personality. Like other psychiatric questions this problem is individual. The amount of stress that will harm one child and cause him to regress, will merely stimulate another child to better efforts and improve his personality. Thus one of the difficulties of mental hygiene is that we cannot write a book of simple precise rules from which parents and teachers may discover what is the specific treatment for any particular symptom the child shows. Furthermore, we emphasize that the outward behavior of the child is often not what it appears to be; a child who is over-aggressive may be compensating for lack of aggression, while a child who is extremely meek may be bottling up all sorts of hostile tendencies which he dimly realizes are too dangerous to be allowed expression. Therefore, we have to ask ourselves in each case "what does

this behavior mean for this individual child? In view of this child's personality and past experiences, what course of treatment will best help him to work through his problem and achieve a healthy well-balanced personality?"

Since the problem of mental health and mental disease is so enormous and largely unsolved, what can we do in a practical way about it? A foundation for psychiatry should be organized similar to those already existing for tuberculosis, infantile paralysis and cancer. Such a foundation would serve two fundamental purposes. It would secure funds for research and teaching, and it would educate the general public concerning the problems of mental health and mental disease.

A glance at what has been accomplished in dealing with the problem of tuberculosis shows what can be done for psychiatry. Large sums have been available for carrying out research and better methods of treatment. Special attention has been paid to prevention. The general public is now enlightened about tuberculosis so that the old stigma has largely disappeared. A person who thinks he may have incipient tuberculosis consults a physician in order to find out his condition, and to carry out whatever treatment may be necessary. Everyone realizes the importance of early diagnosis and treatment. Considering the greater magnitude of the problem of mental disease, and the relatively lesser extent of knowledge about it, we can see what could be accomplished by a psychiatric foundation.

Approximately 600,000 persons suffer from serious types of mental disorders; they occupy only one half of the hospital beds in the country. At the very least 8,000,000 persons, or 6 percent of the population, suffer from some sort of mental disease or defect. It is estimated that 10,000,000 of our population will require hospitalization for mental disorder at some time during their lives. Five percent of those examined under Selective Service were rejected for psychiatric causes. We spend over a quarter of a billion dollars each year on institutions for mental disease. A most conservative estimate is that mental disease is costing us a billion dollars a year through the cost of

maintaining mental institutions and the loss of wages of those who are hospitalized, the decreased wages of those suffering from milder disorders, and many other incidental items. If we consider also many of our most serious social problems, which involve the need for psychiatry, the cost would be infinitely greater. The amount of suffering involved is great, and as the late Dr. William Mayo once said mental disease is responsible for more suffering than any other type of disease.

We know comparatively little about our most serious types of mental disorders, either as regards their cause, their prevention or their treatment. We have made great progress in the past fifty years, but there are still enormous gaps in our knowledge. There is only one answer to this—research and more research. Research requires two things, highly trained competent personnel and money. To produce the highly trained competent personnel requires money. There is a great dearth of qualified research workers in the field of psychiatry, and there is a tremendous shortage of funds with which to carry out the researches which can be shown to be worthwhile. The public is not educated to make use of the knowledge which we already have, and in many instances is not only ignorant but seriously misinformed on psychiatric matters.

I suggest that we establish a Psychiatric Foundation for the purpose of accomplishing these desired results. Our able executive assistant, Mr. Austin Davies, has not been content to rest on the basis of the plaque presented to him by this Association at the Centennial Meeting, expressing our appreciation of his good work in the past, but has been working on plans for setting up such a foundation. He has interviewed many of the leaders of such work throughout the country, and has familiarized himself with the technique employed and the difficulties encountered by other foundations. This material he has ready to put to use whenever we give him the signal to go ahead.

I feel that this foundation should be established immediately. It will interest and educate the public in the problems of mental health and mental disease; it will awaken a

popular response which will give us a large group of intelligent and interested persons standing back of any proper legislation or well-planned program; it will give us the funds for training the necessary personnel; it will also make available large sums for carrying out needed research. It is hard to realize why prejudice exists against research. To many it signifies an asthenic, stoop-shouldered, near-sighted scientist retiring into his ivory tower and working on some thoroughly impractical and unimportant detail. We must educate the public about what research in psychiatry is and what it may accomplish. We need to point to the large corporations in this country which spend millions on research every year and find that it pays them rich dividends.

During the war this Government found that research was the only way to solve the great problems which confronted it, and spent two billion dollars using the most competent minds available to solve one of these problems (the atomic bomb). The same formula should be applied to the problem of mental disease. The difficult and important problem of mental health calls for the mobilization of the finest minds available in organizing and carrying out a far-reaching research program.

Two billion dollars represents the actual amount now being paid for mental disease every two years. Shall we continue to pay two billion dollars every two years for mental disease, or shall we take two billion dollars and see if we cannot find out enough about mental disease to greatly reduce its costs? The answer is so simple and obvious that it hardly seems necessary to say anything more. If we but look at the results achieved in tuberculosis by an adequate program, we should have no doubt as to what is possible in dealing with mental disease.

The future of psychiatry will depend more than anything else upon our ability to train leaders in this field. There is probably no more important task than the development of a plan for systematically picking out the potential leaders in psychiatry and providing the finest type of training for them.

I suggest that we should use some of the money from the Foundation for setting up

fellowships for such future leaders, following to a considerable extent the plan of the Westinghouse science fellowships which have been worked out very carefully. However, in such a selection we should pay much greater attention to the personality of the individual and not merely train some brilliant but maladjusted individual so that as a representative of psychiatry he will exemplify the truth that many persons of the highest intelligence may be inadequate, maladjusted and still living at an infantile level.

I believe that we can work out methods for making such a selection. It should consist of a careful life history of the individual; the use of all of the standard type of intelligence and aptitude tests, and a careful evaluation of his work so far in the medical field, and finally a personal interview by a small board composed of about five of our leading psychiatrists, men who would be noted not only for their technical knowledge of psychiatry, but for their outstanding qualities of leadership and their own well-balanced personalities. We should select from three to five such individuals each year; their training period should be for at least five years, and no one plan of training should apply to all of them. The varying interests in the different fields of psychiatry will make different types of training necessary. Such fellowships should be from year to year, and if at any time an individual does not live up to the promise of the earlier estimates he may be dropped as far as further financial aid is concerned. If five years from now we were to have a steady stream of only five such individuals given to us, they would profoundly affect the development of psychiatry. Furthermore the methods worked out for selection and training in this field might be used as models in other fields of science.

When we investigate the amount of research being carried on in psychiatry, we find that the results are not at all favorable as compared with other fields of medicine. According to Dr. Parran, Surgeon General of the U. S. Public Health Service, "today all public and private agencies are spending something like 25¢ per year for research for each estimated case of mental disease, or perhaps \$1.00 for each totally disabled

case, as compared for example with \$100 per case for poliomyelitis, a disease which is far less prevalent, yet for every dollar public agencies allow to psychiatric research they spend well over \$100 for mental hospital cases alone."

During the past fifty years we have made enormous strides in our understanding of the causes and treatment of mental disorders. We have learned something of the effect of heredity. A disease like general paresis is now known to be due to syphilitic infection of the brain. We have methods of treatment now which restore approximately one-third of these cases, whereas forty years ago practically all of them died; moreover, we understand methods of prevention, although they are not applied as they should be because of false conventional standards. We also know how persons are emotionally conditioned, how they may become hopeless invalids just as badly crippled by psychological factors as by infantile paralysis, and we know something about how to treat and prevent all of this. There are, however, enormous gaps in our knowledge. We know comparatively little about our most serious types of mental disorders. In spite of years of study and many ingenious theories, it is only fair to state that we do not know the cause of schizophrenia or of manic-depressive psychosis.

Geriatrics is a most important and rapidly developing field. Since more persons are living to advanced age, there is a great increase of psychoses due to cerebral arteriosclerosis and senile dementia. We must have, therefore, more fundamental research on these important problems. But this research, like all research, will cost a great deal of money; we do not have this money. The only answer to this problem appears to be a foundation which will secure the necessary funds. I feel that we should have no hesitation in putting all the facts before the public. We should point out that our facilities for the care of the mentally sick are inadequately financed, and that as a result, our mental hospitals are poorly staffed, and the type of care given in many of them is not up to the standards which this Association insists should be a minimum. We should

tell the public quite frankly that much is unsatisfactory, many problems are unsolved, and the only hope of grappling successfully with the mental health problem is by public appropriations for our mental hospitals, more humane commitment laws, and an entire change in attitudes toward mental sickness. We must insist that people everywhere take the same attitude toward mental illness that they have toward physical illness.

One of the first problems facing us is the size of our organization. We now have about 4,000 members, and we anticipate that the number of psychiatrists will increase greatly during the next five years. If we continue on our present basis for five more years we can expect to have a minimum of 5,000 members. Our Association, which twenty-five years ago was so small that all the members could meet together in one joint session, has now become so large and unwieldy that its very size poses new problems, particularly with regard to the annual meeting.

Do we wish all doctors working in psychiatry to be members of our Association, or do we wish to raise the requirements for admission and actually decrease our total membership? There are certain advantages in a smaller membership, but it is my feeling that we should continue as an Association that represents all of psychiatry, that we should welcome all psychiatrists to membership, and hence, that we should continue to increase our membership. There is great need for an Association which represents all psychiatrists, and I think it can be said that we are the only such Association in existence. However, there is also a proper place for other associations which bring in the ancillary disciplines, such as psychology and psychiatric social service.

It has been suggested that we should develop a type of associate membership by which clinical psychologists, psychiatric social workers, psychiatric nurses, occupational therapists and other groups who work with psychiatric patients might join us. There is considerable merit in this idea, and I believe that we should give it careful consideration. However, clinical psychologists are admitted to the American Psy-

chopathological Association, and psychiatric social workers to the American Orthopsychiatric Association, and both of these societies are open to other affiliated workers. For us to attempt to be all comprehensive and representative would multiply our size and our problems, would change the fundamental character of our own organization, and would enter us into direct competition with other societies.

A second problem is the period of tenure of our elective and appointive officers. It is only too true that a president completes his term about the time that he becomes familiar with the workings of the Association. After that, of course, he does serve on the Council for a period of three years, but it still does not give the Association any continuous head. One suggestion by our president-elect is that a separate officer be designated to preside over the Council instead of having the president do this.

I feel that eventually we need a full-time psychiatrist in our central office. It has been suggested that we have a full-time director or medical director. A variation of this proposal is that we appoint a full-time medical secretary. I feel that the latter title is more appropriate; having both a medical director and a president would create a great deal of confusion as to just who is the head of the Association, at least in the mind of the public, if not among our own members. The title of medical secretary would indicate more correctly the scope of his duties.

I believe that as soon as possible the AMERICAN JOURNAL OF PSYCHIATRY should become a monthly magazine. This cannot be done without added expense and a complete reorganization of the editorial structure. Dr. Farrar has done a fine job as editor of the JOURNAL. He has given a tremendous amount of his time and has worked under unusually difficult circumstances because of the war. I do not believe that he or any other member can carry the full editorial burden of a monthly magazine. The only solution is to have a full-time editorial assistant who will carry out routine administrative details of the JOURNAL, the assembling of material, the editorial correction of articles and proofs, and arranging the general lay-

out of the magazine. He should be a well-trained scientific writer familiar with medical and psychiatric terminology, and capable of handling all problems except questions which the editorial board would wish to decide. He should probably be attached to the central office. With the increased advertising revenue of a monthly journal, the cost would not be so much greater than that of a bi-monthly journal; however, I feel that our members would be willing to pay the additional cost of a monthly journal since it would bring more and fuller reports of psychiatric studies and events.

An alternative plan is to return to the custom which existed about thirty years ago of publishing all of the papers of the annual meeting in a single bound edition. This plan is used by the Association for Research in Nervous and Mental Disease. The advantage of this plan is that the papers would all come out together within six months after the annual meeting, so that the majority of the papers would reach the members sooner than they do now. There would presumably be no advertising in such volumes. The JOURNAL would then be open to articles submitted regularly and would not depend upon the annual meeting for its scientific articles.

There is one important difficulty in this plan. Since we now hold a number of sessions each day instead of one joint session as formerly, there would be approximately three times as much scientific material for publication as compared with thirty years ago. At least three volumes would be required to contain all of the scientific papers of an annual meeting. Estimating our cost on the same basis as the Association for Research in Nervous and Mental Disease does, we would have to increase our dues ten to fifteen dollars a year to cover the additional publishing expense.

One problem of organization which has never been settled satisfactorily is that of sections. At the present time the Council has authority to establish various sections, but their purposes, privileges and limitations are not described. We now have four sections: convulsive disorders, forensic psychiatry, psychoanalysis and psychopathology of childhood. In general the Council has

opposed setting up new sections. As now constituted these sections enjoy some degree of autonomy, but their functions are ill-defined, and their officers and members do not know just what is expected of them.

A few years ago sections enjoyed complete autonomy in organizing programs. As a result these programs were set up independently and with no coordination with the chairman of the Program Committee. Consequently some members read papers before two or three sections, as well as another paper at one of the general meetings. This situation was discussed before the Council, which decided that each section should submit its program to the Program Committee, which as final authority might make deletions or additions.

The plan for the program has accordingly been worked out in a fairly satisfactory manner. There is still no clearly-defined statement as to the purpose of each section, what it is expected to do, and what it is expected not to do. Some sections have tried to draft rules to cover their proceedings, but it is questionable whether these rules have any real force. The Council has promulgated almost no regulations governing requirements for membership in special sections. Some sections have even appointed committees to make special studies. This year one committee appointed by the chairman of a section, sent a report to the *AMERICAN JOURNAL OF PSYCHIATRY* and insisted on its publication. The constitution states that all committees shall be appointed by the President, therefore under the constitution no committee appointed by a section chairman has any official status. And in any event, no committee report is to be published without approval of the Council.

Some persons feel that sections as they now exist should be abolished, while others feel that they should be given greater independence with authority to study whatever problems they choose. Since committees are already organized for such study, the establishment of a second group within a section to study the same matter should be avoided, if possible, as a needless duplication of effort. To mention a case in point, we have a Committee on Legal Aspects of Psychiatry, and a Section on Forensic Psy-

chiatry. During the past year the Section on Forensic Psychiatry has appointed one or more committees, which have been making studies and preparing reports, and all of this has been done independently, and without regard for the Committee on Legal Aspects of Psychiatry.

I would be the last one to prevent groups from studying problems and making reports to the Association. In fact the more the better. However, it is a different matter and undesirable to have within the framework of our organization separate committees covering the same subject without submitting reports to the Council, and without the President or the Council even being aware of their existence. I do not wish to criticize the authors of such studies. Our Association needs more leaven, and should not hamper individual achievement with organizational procedure. I am not in favor of red tape. I believe that rules exist to help us carry out our purposes better. When they fail to do so they should be modified. Let us interpret them liberally. The spirit and not the letter of the rules should prevail. Nevertheless, even with this provision, I think that the present rules are hopelessly confused, and I invite constructive suggestions for improving them.

If we are to continue sections as foci for special research, many additional topics are sufficiently important to be the bases of sections. To mention a few: military psychiatry, alcohol, shock therapy, psychosomatic medicine, and group therapy. On the other hand, if the only purpose of sections is to draw up a program for the annual meeting, they might well be eliminated; the Program Committee could then either itself organize a session on a particular topic or appoint a sub-committee of interested persons to do so. Under the present plan of organization of the Program Committee, definite responsibility for the program of each section is already assigned to a committee member.

It is my opinion after careful consideration, that sections as now constituted serve no useful purpose, and that the Program Committee could properly take over their work. I repeat that I refer to sections "as now constituted." Now is the time for those who wish sections to have more autonomy

and responsibility, and to develop in new directions, to present concrete proposals to this end.

With the increase in size of our Association, we cannot continue the older plan of a single session throughout the four days. Given the necessity for several sessions, we are agreed that some sessions should focus their attention on special topics. The only question is whether we should have some sort of section organization which would take more responsibility for organizing such sessions. I recommend that we not only continue our present sections, but that we develop more sections. Leaders of these sections should be carefully chosen, and sections should be used for the development of younger men, giving them certain administrative duties and responsibilities, and allowing them to use some degree of initiative. We should try to give as many members as possible some sort of duty or responsibility in the Association. The member who has gone for years without serving on a committee, without ever actively participating in the affairs of the Association, will not develop the same interest in the Association and loyalty to it as one who has taken part. With the increasing size of the Association it becomes more and more difficult to provide such activities for the members. In addition, the very size of the Association means that the President and the Council are not personally acquainted with a large number of the members. By development of sections we can solve some of these problems.

Another problem concerns the affiliated societies. As organized at present they have a loose relationship to our Association. Each one is allowed to send a representative to Council meetings. Although this representative may not vote, he may participate in discussions. His expenses to Council meetings must be borne by the affiliated societies. Many of these affiliated societies have members who do not belong to The American Psychiatric Association and who are not eligible for membership. Under such circumstances they cannot have any more integral relationship. I believe that the affiliated societies should continue without any changes.

We should also consider whether our Association should be broken up into geographi-

cal sections with local meetings and some degree of autonomy. Because of the increasing size of our Association this suggestion should be most carefully considered.

Our Association should establish certain minimum psychiatric standards, and should bring them constantly to the attention of all interested parties. These standards should be available as the official opinion of this Association, to back up demands for changes and improvements in all fields of psychiatry. It is important that we realize that standards are never final, and that with changing conditions and increased knowledge the standards for teaching psychiatry, the standards for care in mental hospitals, and even our classification of mental diseases must undergo continual modification. The most urgent requirements have been:

First: to agree upon a minimum standard of teaching psychiatry in our medical schools. This matter is well in hand, due largely to our Committee on Psychiatry in Medical Education.

Second: to set up standards for state hospitals, outpatient psychiatric clinics and child guidance clinics. This has been done recently by our Committee on Psychiatric Standards and Policies, and a large number of their reports on this subject have been circulated throughout the country.

Third: to draw up a standard classification of mental disease. This, likewise, has been done. Recently, however, the Army made up a new classification of mental disorders with important differences from the standard classifications now used throughout the country. The Navy has also created a new classification which is more like that of the Army than our present classification. The same is true of the U. S. Public Health Service. The Veterans Administration is contemplating the adoption of a modification of the Army classification, and will probably carry out for the next six months a dual system of diagnosis, using both the present standard nomenclature and the new Army classification. At the end of six months it expects to decide whether to adopt some modification of the Army classification or to continue the present standard nomenclature. Such a change in classification would affect

profoundly all the vital statistics of the country.

It is my recommendation that we make a very careful study of this whole problem, and that we all become familiar with these newer classifications. I would urge that they all be published together, either in the JOURNAL or in a mimeographed form, and sent to all members of the Association. With full knowledge of these different nomenclatures we could then decide whether or not to alter our present nomenclature in any manner.

Fourth: we should set up an ideal commitment law. Our Committee on Standards and Policies has given us a general outline which is excellent as far as it goes. I believe that we should continue to work so that we may have an actual law drawn up which can be given to any state legislature as suitable for incorporating into the statutes. While a few minor changes will, of course, be necessary, for different states, I believe that we can eventually work out such an ideal commitment law. This should be publicized as much as possible, and we should take a positive stand in this matter.

We must insist on the medical approach to this problem. Our patients are sick persons. It should be possible to arrange for their admission to hospitals with a minimum of red tape. Unfortunately, the public is obsessed with the idea that large numbers of persons who are not mentally sick are being railroaded to mental hospitals by designing relatives and friends who seek to "put them away," and that only a strenuous fight against commitment can save them from unjust imprisonment in a mental institution.

I have been in psychiatry for over thirty years. At the Boston Psychopathic Hospital, where I worked for fourteen and a half years, we committed over 1,000 patients every year to the state hospitals. At Bellevue Hospital in New York City, where I was for five and a half years, we committed about 8,000 patients annually to state hospitals. In all of this time I have seen only two attempts at railroading, and neither of them was successful.

Experience shows that the real problem of commitment (and I am sure that all of you who have had experience in this matter

will agree with me), is to gain the consent of relatives and friends for the commitment of persons who require institutional care. Our judges all lean over backwards in the matter of commitment, and juries, which are necessary and desirable in a democracy such as ours, commonly turn a considerable number of mentally sick patients loose in the community. Many tragedies have occurred because of this. The idea that the average lay jury can decide the delicate question of mental illness is, on the face of it, an absurdity. I would like to draw a comparison between contagious diseases such as smallpox and psychiatric disorders. If a patient has smallpox a doctor from the Public Health Service is called in and makes a diagnosis. He immediately orders that the patient be removed to a hospital for contagious diseases to assure proper care and treatment and to protect society. Nobody questions this procedure, and as far as I know, no one has advocated that a jury should be impaneled to pass on the diagnosis and decide whether or not the patient has smallpox. The average layman confronted with this situation would probably say, "I know nothing about smallpox; that is a problem for doctors. A doctor is the only person competent to decide and diagnose." When it comes to mental disorders, however, we find a different attitude. The ordinary layman is prepared to stake his judgment against that of the physician. Many times I have listened to unqualified medical consultants and even lawyers set themselves up as experts in mental cases, and claim that their opinion should receive consideration equal to that of the expert psychiatrist. The very nature of mental disease is such that many patients are suspicious, feel that they are being treated unfairly, and that plots against them exist. Many of the laity are honestly misled by the plausible statements of such patients, and do not realize that they cannot be taken at face value.

In the justifiable attempt to safeguard the rights of the individual and prevent improper commitment, our present laws hedge commitment procedures with so many restrictions that they fail to accomplish what should be the real purpose of any commitment law, namely to secure mentally sick persons the

proper care and treatment with the minimum harm to the patient, and to make certain that persons who are not mentally sick are not improperly committed.

Most of our commitment laws as drawn up are aimed at the second provision and do not accomplish the first. Can one conceive of any worse treatment for a mentally sick person already upset emotionally, possibly suspicious and feeling that persons are against him, than to be arrested on a warrant by a policeman or sheriff, locked up in a jail with common criminals, brought before a judge who says, "You are charged with insanity; how do you plead—guilty or not guilty?"; being tried in a court room with a jury and all the procedures of any criminal trial, and then being told that the judge and jury find him insane, and having a sheriff transport him in handcuffs to a mental hospital?

Not long ago in California a wife decided that her husband was mentally sick. He was depressed and had delusions that persons were trying to kill him. Following the regular legal procedure she swore out a warrant, the sheriff arrested the patient, and he was taken to the county jail, there to await a hearing before the judge. That night he hanged himself in the jail. To those sticklers for legal procedure and defense of the legal rights of the patient, I would point out that his legal rights were well preserved. He was arrested on a warrant by a sheriff; he was not sent to a hospital without due process of law and a chance to appear before the judge. Perhaps if he had, he might be alive today. The point I wish to make is that the public is so obsessed with the legal point of view and the alleged infallibility of legal procedure that they insist on protecting the so-called legal rights of the patient without thinking of what his medical rights are. I would like to formulate the medical rights of the mentally-sick person as follows:

He should be entitled to immediate examination by competent psychiatrists and immediate admission to a psychiatric hospital or ward, where he can receive suitable treatment. No one would think of keeping a physically sick person detained in jail pending a determination of his medical condition by non-medical persons. It is equally absurd

to do the same for the mentally sick person. Again I repeat, that mental sickness is a medical problem to be handled by the medical profession. There should be the minimum of legal procedures, and these should not prevent mentally sick persons from receiving immediate treatment, and should not be of such a nature as to increase the patient's mental sickness or even jeopardize his life or the lives of others.

A number of our states have simple procedures by which a patient can be brought to a psychiatric hospital for temporary care and observation. Where these laws exist, and I speak from personal experience with regard to Massachusetts and New York, they work quite successfully and there is little difficulty in carrying them out. I believe that a final solution to this whole situation will depend upon the development of more psychiatric wards in general hospitals, not simply places for the now fashionable psychosomatic medicine cases, but wards for all types of mental disorders from the most serious to the mildest.

In this connection I wish to express approval of the plan formulated by the Veterans Administration for building their new hospitals. The Veterans Administration has set up as a standard that in a general hospital of 1000 beds, 100 beds or 10 percent shall be for acute psychiatric patients; 100 beds or 10 percent shall be for psychoneurotic patients including some psychosomatic cases, and 100 beds or 10 percent shall be for neurological cases. Under such an organization neuropsychiatry has 30 percent or 300 beds in a 1000 bed general hospital, and three main services are maintained: medicine, surgery and neuropsychiatry. This is a most progressive measure, and our Association should give some expression of approval to such an important and desirable plan.

The overlapping of psychiatry into so many different fields makes it difficult to say where the province of psychiatry begins and where it ends. Ideally, psychiatry should be represented in all the clinical fields of medicine, and we see a steadily growing tendency to do this. In many of our best teaching hospitals and clinics there is a close liaison between psychiatry and pediatrics. Often a psychiatric service exists as an in-

tegral part of the pediatric service. With the developments in psychosomatic medicine more of this is occurring in general medicine. It will be only a matter of time before this will take place in all fields of medicine. Some see in this a dissolution of psychiatry as a separate branch, and an infiltration into all other clinical branches. To a certain extent this may be so, but in spite of setting up good psychiatric services in all the other clinical fields, we will still have a large group of cases that are primarily psychiatric, and must be taken on to a psychiatric service.

Outside the medical profession many close relationships exist between psychiatry and other fields, and the importance of psychiatry is recognized. In the nursing profession all of our best hospitals require undergraduate training in psychiatry, usually a minimum of two months. Student nurses as a group are eager to have such training, and are uniformly satisfied with having such experience. It is probable that three months rather than two months should be the period for student nurses to spend in psychiatry.

Social service is another field which is closely allied with psychiatry. In all of our good schools of social service, psychiatry is taught to all students, whether or not they are specializing in psychiatric social work. A more intensive course and field training in specialized psychiatric social work is given to students specializing in this field.

Our relationships to the psychiatric nurse, and the psychiatric social worker, have been handled by committees of this Association, who have worked to such good advantage that there is little friction or difference of opinion as to the province, responsibilities and limitations of each field. The same cannot be said of our relationship to psychology. Here there is much overlapping of function, and considerable disagreement as to the exact field and where limitations should exist.

For the past two years we have had a committee working on this problem, and I am happy to say that the psychologists have had a committee of some of their very best members who have worked most cordially with our committee in trying to arrive at a solution. I doubt if one can lay down too rigid regulations in this matter. A great deal must be left in a somewhat intangible

state; there must be a healthier give-and-take on both sides, and a willingness to work the matter out gradually.

It is in the field of psychotherapy that our greatest problem arises. We have persons who are trained to do work in psychotherapy coming from the fields of nursing, social service, occupational therapy, clinical psychology and lay psychoanalysis. In the field of teaching there is also some overlapping. Just where does personnel counselling leave off and treatment of incipient or actual psychoneurosis begin? There is enough material to keep all groups busy. There is at least one thing the psychiatrist does not have to worry about: since he always has more cases than he can possibly handle he will undoubtedly have to avail himself constantly of help from all these different fields.

In the field of criminology we also have our problems. The Federal Government and a number of our state governments, have set up what are really psychiatric clinics, first for the examination of prisoners before trial in order to determine whether or not they are responsible; second for the examination of convicted criminals prior to sentence in order that the judge may impose a proper sentence; and third for the determination of the prisoner's condition and personality makeup to decide whether or not he should be considered for parole. Very few of these clinics have a psychiatrist in charge, and yet the decisions made are those which a psychiatrist is most competent to make. Unfortunately we do not have enough well-trained psychiatrists with suitable experience in this work to head up all these different clinics. We should, therefore, see that more of our good young psychiatrists receive training in this field, and insist that ultimately such clinics should be under the control of psychiatrists.

Psychiatry has made many contributions to the study of crime, and during the present war these have been still further increased. Studies show that people cannot be divided into good and bad, and that men do not necessarily become criminals because they are bad. A great deal of anti-social behavior is based on unconscious mechanisms working within the patient. A study of sex delinquency in girls shows that the delinquency

seldom occurs because the girl is over-sexed, a fact well known to students of the problem! However, published statements to this effect would be received with incredulity and criticism by the majority of our population.

Sometimes a few individuals can be responsible for cultural changes. A single individual is able to mobilize group opinion and alter radically society's attitude on certain questions. It is unfortunately true that it is infinitely easier to affect public attitudes in an unhealthy way than it is to build up healthy attitudes. People are looking for some simple panacea for their personal problems and for all the ills of society. There is no simple, easy solution, and only prolonged hard work will bring the desired result. But it is much more pleasant to listen to the promises of the rabble-rouser, who offers a solution to all problems and who feeds the vanity of his followers by giving them false ideas of their own importance and tearing down the ideas of others. Some of these individuals are merely extremely clever cynical opportunists, who realize that they are only advancing their own selfish interests. There are others, however, who have a paranoid conviction of their own importance and of their own ability to solve the problems of the universe. Psychiatry can help us to the understanding of these individuals.

We have recently witnessed the development of a new field in medicine, at least new in name, psychosomatic medicine. Psychosomatic medicine has become very popular and now is almost a fad. It is fashionable. The same things which psychiatrists have been saying for the past twenty or thirty years, and which went unheeded by a great group of the medical profession, are now uncritically accepted by many.

Psychosomatic medicine emphasizes the relation of mental states to bodily ills. We hear almost nothing of somatopsychic medicine, which is an equally important part, namely the effect of physical states on mental conditions. Psychosomatic medicine is receiving wide acceptance in our general hospitals, and there is no resistance to accepting a patient if he is a psychosomatic patient and not just psychic. It perhaps illustrates the contention of the semantist that words

may hide meanings and that the naming of things is all important. The danger is that the general hospital will accept a few of the milder types of mental disorders under the term psychosomatic, but will refuse other psychiatric cases, and that we will get an artificial line of cleavage which will be bad for psychiatry.

There is already a movement by some to relegate serious mental disorders back to the isolated hospital in the country, the so-called "asylum," and to keep only this small marginal group of psychiatric patients in contact with the rest of medicine. We should fight strenuously to have the general hospital accept all types of psychiatric cases: the alcoholic, the severely psychotic and all the various types of mental disorders. Only in this way will psychiatry remain in the fold of medicine, and will medicine and psychiatry progress as they should.

It is important to note that the American Hospital Association has recommended that alcoholics should be cared for in general hospitals, and that general hospitals should set aside 3 percent of their beds for such cases. The Veterans Administration, by setting up 30 percent of its beds for neuropsychiatric cases, has set a fine example, and the influence of this will certainly be felt throughout the country. However, the Veterans Administration still persists in a moral attitude towards alcoholism, and has not yet come to accept alcoholism among veterans as a sickness, the treatment of which should require its attention. I predict that alcoholism will become a more serious problem, and I feel that the Veterans Administration should make plans at once for dealing with it.

It is estimated that the people of the United States spend over seven billion dollars a year for alcoholic beverages. In addition, excessive drinking, together with disease, crime and poverty resulting directly from the use of alcohol, costs this nation about seven hundred and fifty million dollars a year. Conservative estimates indicate that there are 750,000 chronic alcoholics in this country. We, as psychiatrists, should agitate for better care of the alcoholic. Many of them die in jail because society is not yet willing to provide hospital care for them,

and the only place to put them is in the jail. Since our cities, counties, states and the Federal Government all receive large amounts of revenue from the alcoholic beverage industries, I recommend that we advocate that 10 percent of all revenue so received be devoted to a long-time research of the problem of alcohol addiction and alcoholic mental disorders. A part of this sum might be used for following the Yale plan now established at New Haven and creating an information center, and also establishing actual treatment and hospital facilities. The alcoholic beverage industries should also be requested to cut their advertising budget 10 percent and to donate such monies for research and treatment of alcoholic conditions. If such a program were carried out we would have the facilities for organizing a long-time research and for treatment facilities for alcoholics. The recent Connecticut law providing for a study of the subject and utilizing 9 percent of all state taxes received from the alcoholic beverage industry is a model law that might well be adopted by other states.

In most states, hospital insurance policies do not include psychiatric care. When we are told by internists that over 50 percent of general medical cases are primarily psychiatric, the absurdity of such a situation is apparent. When does a case become psychiatric? What if a case is part psychiatric and part medical or surgical? It is my understanding that in Delaware the Blue Cross has accepted mental disease on the same basis as other sickness, and that the cost of patients at the Delaware State Hospital is paid under the terms of the Blue Cross exactly as if they went into any general hospital. This is the only logical way to deal with the problem. We should fight to have hospital insurance cover psychiatric care in exactly the same way it covers any other kind of medical care. Mental illness is a form of disease. Psychiatry is a branch of medicine. We must keep this relationship constantly before the public. General hospitals should, therefore, be encouraged to develop psychiatric wards and to make the admission of psychiatric patients as easy and as simple as possible. Psychiatric patients will always be willing to come in on a

voluntary basis if a hospital is well run and if proper public relations are developed.

It is my experience that as soon as the public knows that good psychiatric facilities are provided there are plenty of suitable patients. In a well-run hospital it is possible to have admitted on a voluntary basis a large percentage of the serious mental disorders, including cases of schizophrenia and manic-depressive psychosis, and various organic conditions including many cases of general paresis. Families will seek early care when the stigma and disgrace of commitment is abrogated. How many families have said, "Well doctor, we knew that he needed psychiatric care but we could not bring ourselves to take him into court and have him committed!" I know of no stronger indictment of our present system of commitment than the fact that it prevents early treatment in many cases at a time when such treatment might be successful. The families unhappily resort to commitment after the condition has become fixed and chronic.

Recently we have seen a whole series of attacks on our state hospitals in newspapers and magazines. Like most of such attacks there has been a basis for the claims that there were many unsatisfactory conditions in our state hospitals. It is a little distressing to many of us, however, to find that things which we have all been saying for years are suddenly produced by outsiders as startling new discoveries and as evidence of something wrong. It is also important to point out that these investigations of state hospitals have been made at a time when the state hospitals were suffering from conditions imposed by the war.

Suppose we analyze some of these claims. There is first the statement that our mentally sick are inadequately housed. Every psychiatrist knows this and has been saying so for years. Overcrowding of from 20 to 30 percent is common in many of our state hospitals. Because of war conditions there has been no opportunity to build during the past five years. In many states there are mental hospitals that are fire-traps condemned by the fire marshal. We have been saying all this for years. We have been pleading for more money to build adequate state hospitals.

Second: it is stated that our hospitals are under-staffed. Again our answer is that we have been saying this for years. We have been asking for more physicians, nurses and attendants. We have pointed out that accidents and abuse invariably increase where there is inadequate personnel.

Third: it is pointed out that in many states the salaries are inadequate as compared with other types of state positions. The hours of work are much longer and working conditions are unsatisfactory. You have all heard such statements made many times by our members. This is nothing new. We have been protesting against such conditions for a long time. We should protest paying prison guards more than hospital attendants.

Fourth: we are told that at times abuse of patients occurs and that not all of our employees are motivated by the highest ideals. Here we should point out that for the past five years our state hospitals have been operating under war conditions. Many of our best doctors, nurses and attendants have been taken into the Armed Forces. Under such conditions our state hospitals have been working under enormous handicaps and it is not surprising that at times abuses have crept in.

During the war I have had the opportunity of visiting a number of the psychiatric hospitals and wards in the Army and Navy hospitals. I have been impressed by the large number of competent psychiatrists on duty, the liberal provisions for nurses and attendants, the excellent food furnished and, in the rehabilitation hospitals such as those of the Army Air Force, the very large personnel engaged in occupational and recreational therapy, and an amount of space and equipment such as has never been seen before even in our best psychiatric hospitals. A large number of these doctors were from our state hospital services, and are prepared to return to our state hospitals if they are given suitable working conditions and adequate salaries.

The answer to all this is very simple. It is essentially a matter of obtaining sufficient appropriation to establish conditions which will attract competent personnel. The fault is primarily that of the apathetic public which

does not want to be bothered with the problem, but is willing to allow political corruption to waste more than enough money to put hospitals in good condition. In answer to those who protest that we cannot afford to spend more than 250 million dollars a year on our state hospitals, let me point out that we are spending more than 7 billion dollars annually on alcoholic beverages alone.

I suggest that we should siphon off some of the money that we are wasting in paying unnecessary and corrupt Federal, state and municipal employees, should do away with unnecessary building standards, feather-bedding, excess profits and such conditions, and should use some of this money for the benefit of our mentally sick. I see no reason why we should quietly allow such a wastage of money. We must insist and continue to insist that there is great need for this money in caring for the mentally sick, and we must demand that it be so used.

It is a common attitude among psychiatrists to blame the rest of the medical profession and the public generally for not understanding the problems of psychiatry and for not backing up worthwhile psychiatric projects. It is their fault or is it ours? An interesting discussion of this point by Dr. Robert F. Griggs of the National Research Council appears in "Science" for March. I quote in part as follows:

Now at the threshold of the postwar world, we must ask ourselves what kinds of professional services will be rendered by the group which we loosely call biologists. Clearly enough we have not done very much in the war. The most striking feature of the whole war effort from the point of view of biologists is the fact that we were not enabled to render anything like the services which were needed and which we are anxious to give towards the war effort. Why was this so?

The essence of professional service is that it should provide what clients need—not necessarily what they want. Clients are acutely conscious that they need help, but they seldom have any clear conception of what they need from any of the professions. That is one's primary reason for calling a doctor. All that is required of a patient is that awareness of need prompt him to consult a doctor. A competent physician will do the rest.

Here is the first of our problems. We must educate the public, of which the Army is part, to realize what it needs from us. The Army had need of a vast amount of service from our sciences, but it wanted very little.

That is always the way with the Army or, for that matter, with any organization. More than a year before the "bazooka" appeared in North Africa a friend told me that his organization was developing a portable weapon carried by two men that would do the damage of a cannon which had to be mounted on an automobile truck. "But," said he, "the Army will have none of it." We all know the outcome. When the Army was finally convinced and took it up they were inordinately proud of it. Perfecting the weapon required perhaps less work than "selling" it to the Army. Educating the Army to its own need is a major part of war service.

We scientists do not generally appreciate that this is a perfectly expectable characteristic of human nature. You will recall the well-known occasion when George Westinghouse tried to sell air brakes to Vanderbilt, and the railroad magnate dismissed him with the remark that he "had no time to bother with damn fools." We who number so many teachers among us ought to know that education is a slow, difficult process which requires an expert staff, a systematic curriculum and careful organization throughout. . . .

I am reliably informed that \$500,000 was spent for development work on a fungus project which could have been done by mycologists for \$20,000 but the government agency in charge did not know where to turn for assistance. If one were to try to

allocate blame for this waste he would have to charge it not to the Government, but to the patriotic mycologists who though anxious to help did not know that a professional organization was necessary to render effective assistance. If there had been a competent war committee in mycology, alert and able to give the time required to establish the necessary contacts and confidence in the competence of their "profession," the mycologists would, as they should, have made a tremendous contribution to the war and would have secured a recognition of the importance of their science, which is still a long way off. . . .

As an illustration of the amount of persistent education that was necessary to bring that about it is interesting to recall that on the first interview (of plant pathologists) WPB replied, "Oh yes, we recognize that you must have insecticides and we will give you all the blue vitriol you need. But of course every ounce of copper will be used in weapons"—blissfully ignorant that blue vitriol is sulphate of copper.

Applying all this to psychiatry, I would say that it is *our* responsibility to see that the public is adequately informed on the problem of mental disease and the only possible way to do this is to establish a psychiatric foundation.

KARL MURDOCK BOWMAN, M.D.

PRESIDENT 1944-1946

A BIOGRAPHICAL SKETCH

HARRY C. SOLOMON, M.D., BOSTON, Mass.

Dr. Karl Murdock Bowman is President of The American Psychiatric Association. Due to the exigencies of the war and the action of the Office of Defense Transportation, no meeting of the Association was held last year, and therefore Dr. Bowman holds the position of president for a two year period, a length of service which is unique.

A great deal of work devolves upon the president of this organization and, because of the time extension of the incumbency and the uncertainties that have existed, this work has been doubled. Preparations for a meeting in June, 1945, had to be carried on until it became evident that it could not be held. Then it appeared that it would be possible to hold a meeting in the fall, for which preparations had to be instituted and again this meeting was found inadvisable. But no complaints of overwork or signs of upset were evidenced by our president.

The election to the office of president of The American Psychiatric Association is one of the highest honors that can be bestowed upon a psychiatrist by his fellows. One may, therefore, well ask what sort of a person it is who has been so honored.

In physical appearance Karl Bowman is a typical American male. He is of average height, he does not have a moving picture profile, he is not distinguished by sartorial elegance, he has a very pleasant smile, he tells good stories, he has a humorous glitter in his eye on such occasions, but there is certainly no esoteric electric hypnotic gaze. He is the sort of person with whom one likes to go off on a jaunt, either for an evening or a week. He is amusing, stimulating and companionable. If he has one physical feature that is not average it is the retention of a full head of hair, not wavy, not particularly remarkable except for its preservation. Certainly this is not the cartoonist idea of a psychiatrist.

Dr. Bowman was not a child prodigy. Born in 1888 in Topeka, Kansas, he received his A. B. degree from Washburn College, Topeka, in 1909, and his M. D. from the University of California Medical School in 1913. Following his graduation from medical school he interned at the Children's Hospital, Los Angeles, the Seton Hospital and the Roosevelt Hospital in New York, and in 1915 became associated with Bloomingdale Hospital as assistant physician.

One may well ask what it is about Karl Bowman that has caused him to rise to leadership in his profession. That is the question that the writer of this biography will attempt to answer. The writer is not a professional biographer, in fact, he is not much of a writer of any sort, and so, with the reader's permission, he will drop out of literary form and try to tell about his friend Bowman, using the vernacular and the personal pronoun in the first person.

I first became acquainted with Karl Bowman when the wheel of fortune threw us together as roommates in Savenay, France, in the spring of 1919. He worked hard but when the work hour was over he knew how to relax. He was gay, he was a good companion at the card table, on walks, at dances. After we turned in at night conversation continued and psychiatry was by no means left off the agenda. I learned quickly that he was dependable, self-assured, a good teamworker, not unduly sensitive, not afraid of responsibility and altogether the sort of person one likes to be with both in work and play. I learned that he was proud of his American roots but never vain-glorious or expectant of special consideration. He is a descendant of Isaac Allerton, a signer of the Mayflower Compact and of Nathaniel Bowman who came to America in Winthrop's Fleet in 1630. I also learned that he had worked hard to help defray some of the expenses of his education and that he had no

great desire to accumulate wealth—that he asked of life an opportunity to work hard, to pursue his interests and to contribute in his chosen field to his capacity. He was very devoted to the field of psychiatry and thought Bloomingdale Hospital was a great institution, in fact, debates which sometimes became acrimonious arose between us as to the relative values of Bloomingdale Hospital and the Boston Psychopathic Hospital. It became evident that he was enthusiastic about the thing in which he was immersed. He was proud of his college, of his medical school, of his hospitals. He enjoyed his war experience. He had spent a considerable period during the war in England with Bernard Hart from whom he learned a great deal. I found that he had a marked ability to explain clearly knowledge he had acquired. This capacity for clear exposition has been one of his great assets in teaching.

He published four articles dealing with his war experiences, one of which won him the Wellcome Prize.

With the conclusion of his military experiences he returned to Bloomingdale Hospital and became absorbed in metabolic studies of psychotic patients. However, his stay at Bloomingdale was not as long as he had anticipated because in 1921 he was invited by Dr. C. Macfie Campbell to come to the Boston Psychopathic Hospital as his first assistant, with the title of chief medical officer, and to take a teaching position at the Harvard Medical School. Thus our paths crossed again, and for the next 15 years we worked in close association and I am happy to say in close harmony. I believe he had to retract somewhat his belief in the superiority of Bloomingdale over the Psychopathic, but perhaps he can rationalize this on the basis of his contribution to the latter institution. At any rate, one can say with assurance that he was always loyal to Bloomingdale and always sincerely grateful for the opportunities that it afforded him.

During the 15 years that he remained in Boston his interests reached out in many directions, his investigations developed into a number of fields in medicine and in psychiatry. He taught medical students at Boston University School of Medicine and Harvard Medical School and attained the

rank of assistant professor of psychiatry in each school. He developed a course in clinical psychiatry for Simmons College School of Social Work and taught at the School of Social Work of Smith College. As previously mentioned, he was a clear expositor, talking easily, with a pleasant voice but without affectation or rhetorical flourishes. He was popular with the students. Even the 15 years in Boston did not taint his Western accent, and so he was able to go to New York and California without offending the ears of people in these areas.

His interests carried him from the laboratory into clinical studies and into community relations. His interest in mental hygiene led to the publication of a book entitled "Personal Problems of Men and Women" which was published in four countries—the United States, England, Denmark and Sweden.

In the period of his service at the Boston Psychopathic Hospital he published more than 30 articles, the first group being related to chemical and metabolic studies, the latter ones to the broader issues of mental hygiene and psychiatry.

He proved to be an excellent chief medical officer, was a good subordinate to a chief who expected hard work, clear thinking and devotion to patients in the hospital. Dr. Bowman was a good organizer and director of the medical staff; always ready to joke and to have good personal relations at a social level with his juniors, he nevertheless made them toe the mark in their professional work. This dual capacity of being a good fellow but a stern taskmaster won him both the affection and respect of a large number of young men and women who served under him.

Perhaps his most successful work during his Boston period was the rearing of four boys. Although his methodology in supervising these active youngsters was not always consistent with his lecturing on how to raise children, the results have proven the wisdom of his procedures.

If the upbringing of his children was the most important endeavor of his Boston period, undoubtedly the most outstanding accomplishment of his earlier period was his marriage to Eliza Abbott Stearns on August 18, 1916. Mrs. Bowman, known to most

of her associates as Betty, has contributed very largely to Dr. Bowman's success. An understanding wife is indeed a helpmate, and Mrs. Bowman has given every evidence of understanding her husband.

The long period of training from his graduation from medical school in 1913 to the conclusion of his services at the Boston Psychopathic Hospital in 1935 prepared him to take on the arduous duties of the director of the division of psychiatry at Bellevue Hospital and professor of psychiatry at New York University College of Medicine. He filled these two positions from 1936 to 1941. His positions in New York required the utmost in organizing ability, tact and diplomacy. The reorganization of the psychiatric service at Bellevue, its relations with the courts and the revamping of the teaching at the medical school were in themselves major tasks which had to be done in a period of considerable political pressure. Despite the pressure of administrative functioning, he was able to find time to stimulate and take part in medical research, and some 40 articles bearing his name as an author were published during this period.

In 1941 he returned to his old medical school of the University of California as professor of psychiatry and the director of the Langley Porter Clinic. The Langley Porter Clinic is a model psychiatric hospital and was organized by Dr. Bowman and managed in all aspects by him since its opening. The hospital is a joint undertaking of the state and the medical school, and it unquestionably required a great deal of finesse to work out the details of a bi-headed control, all of which had to be done in the very difficult war period, with a shortage of personnel of all categories.

More remarkable than his ability to get the organization so well in hand during this trying period is the fact that the end was apparently accomplished without disturbance of his equanimity or change in his personality. It was my good fortune not only to see him at work during this period, but to make two trips with him, one in November and December of 1944, the other in June and July of 1945. On each occasion we lived and worked in a group for two

weeks. He was still the same Karl Bowman, stable, unruffled, incisive, jolly.

Like the lion who has once tasted blood, Dr. Bowman, after his experience in the first World War, was continuously interested in military problems. With the beginning of mobilization in 1940 he became extremely active. He was a Lt. Commander in the U. S. Naval Reserve from 1935, but was not called into active service because of his teaching and hospital responsibilities. However, his advice and counsel were sought continuously by both Army and Navy. He was a committee member of the National Research Council; he was most active in the development of induction examinations; he served in many capacities with Selective Service. A large part of his time seems to have been spent in the air flying between San Francisco, Washington, Seattle and other places throughout the country. Even with all these activities, not the least of which was working for the benefit of The American Psychiatric Association, his pen was not idle and his researches in psychiatry were not dulled. Some 15 more studies were published in this latter period.

It would be superfluous to note the various honors and distinctions that have come to Dr. Bowman over the years. Some of these are noted in Who's Who, but it may be mentioned that he is a member of Sigma Xi, Phi Delta Theta, Alpha Omega Alpha, that he is the recipient of a Selective Service medal, that he is the psychiatric consultant for the American Red Cross and for the Veterans Administration.

I would prophesy that when the gavel falls at the 1946 meeting of The American Psychiatric Association one will see a quiet, unruffled presiding officer who, without undue flourishes, will immediately command the attention of the entire audience. I will further prophesy that when he is called upon to present his Presidential Address he will command complete silence among the audience, that his words of wisdom will flow easily and readily, that they will be clear and understood without difficulty and that the majority of the listeners will give the highest of all praise—the remark that “that is what I have been thinking for a long time.”

PSYCHOTHERAPEUTIC ASPECTS OF SYMPTOMATIC TREATMENT

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Treatment of emotional disorders directed towards the relief of symptoms rather than towards removal of their causes may have implications beyond amelioration of the symptoms. Properly handled it may have effects on the patient's attitudes towards his illness and towards his physician which are of considerable psychotherapeutic value. The purpose of this paper is to consider certain psychotherapeutic effects of symptomatic treatment observed in army psychiatric casualties. Although the observations are based solely on soldiers, it is believed that they have general applicability to the extent that the same factors operate in all patients with functional complaints.

Palliative treatment of functional disease is very widespread in army practice. Perhaps the most significant reason is that emphasis is on returning the patient to duty as rapidly as possible, rather than on fundamentally modifying his pathological attitudes. The army hospital is under pressure to keep at maximum the percentage of patients returned to duty. Relapses after leaving the hospital do not affect this percentage, nor do they haunt the physician's conscience, because a patient discharged from the hospital is usually lost from sight. As a result the incentive is great to ameliorate a patient's symptoms in any way possible and return him to duty, even if the emotional stresses which caused his condition might shortly produce a relapse. Another reason for the widespread use of symptomatic treatment is that the army doctor ordinarily has no time to conduct intensive psychotherapy. If it appears that the patient cannot be returned to duty without this, he is usually rightly regarded as too great a burden on the Army and is released from the service.

A further cause for the popularity of symptomatic therapy in army practice is that it seems to be rewarded with a relatively high degree of success. The chief reason is probably that emotional disturbances coming to the attention of the army psychiatrist

tend to be more superficial than those seen by his civilian counterpart. The army psychiatrist sees many soldiers with mild tension headaches or heartburn, for example, who, if they developed similar symptoms in civilian life would probably treat themselves under the guidance of the corner druggist. Such cases might be expected to respond more favorably to symptomatic measures than the more severe psychoneurotics of civilian practice.

In the Army certain unfavorable features of the doctor-patient relationship which may be favorably influenced by symptomatic treatment are thrown into sharp relief. For reasons to be discussed, soldiers often approach the medical officer with a considerable degree of distrust and expectation of rebuff, especially if their bodily disturbances are emotionally determined. They tend to feel that the medical officer is not really interested, assumes that they are "goldbricking," and will make no real effort to cure them. Similar attitudes may be seen in many civilian patients in outpatient departments and public wards. Observations of the effects of symptomatic remedies in undermining these harmful attitudes in army patients should therefore also be relevant to civilian ones.

The most common psychic and somatic disturbances of soldiers as of civilians are fatigue, anxiety, insomnia, restlessness, weight loss, and a wide assortment of bodily symptoms chiefly referable to the head, gastro-intestinal, cardio-vascular and musculo-skeletal systems. The chief symptomatic treatments used have been sedation, sometimes carried to the point of prolonged narcosis, subcoma insulin treatment, various forms of physiotherapy, and certain drugs with more or less specific effects. Such are aspirin and similar compounds for aches and pains, antispasmodics, alkalis and gels to relieve gastro-intestinal complaints, benzedrine to combat fatigue and depression, ergotamine tartrate to dampen sympathetic

overactivity(7), and atropine, which sometimes has a specific effect on weakness due to relative hypoglycemia(1).

The pitfalls of symptomatic therapy in psychiatric disorders are well known and need merely be mentioned. Perhaps the most serious danger is that of making the patient so comfortable that he loses the incentive for changing his attitudes or solving the conflicts which are the sources of his symptoms. A little emotional distress or bodily discomfort may act as a useful spur to the patient to come to grips with his problems. He may come to rely on medication to relieve his uneasiness, thus indefinitely postponing any progress to genuine cure. This possibility is especially strong with sedation, to which unstable individuals may readily become addicted. Symptomatic treatment, furthermore, may tend to focus the attention of both patient and physician too sharply on the symptoms, to the neglect of underlying issues. Therapeutic contacts, particularly the brief ones characteristic of an army setting, may become unduly occupied with how the stomachache or headache is today to the neglect of more important matters. Occasionally, the use of symptomatic therapy may have a subtly disturbing effect on the patient's confidence in the physician. If the latter appears too interested in the patient's bodily complaints, he may appear to the patient to have fallen into a trap; to have "taken the bait" of the symptom and thereby to have overlooked the real problem which it concealed. This type of reaction, which may occur at an unconscious level, results usually in loss of faith in the physician and the end of his usefulness. It is more likely to arise in the complex psychoneuroses of civilian practice than in the relatively simple ones seen in the Army. Finally, symptomatic treatment may confuse the patient by seeming to imply a contradiction. One patient expressed this by saying: "You say my illness is all in my mind and then you give me pills for it." This difficulty can usually be circumvented by stressing the fact that bodily disturbances on an emotional basis may still be perfectly genuine.

The beneficial psychological effects of symptomatic treatment may conveniently be considered under four headings: (1) direct

attack on the basic psychopathological process, (2) facilitation of approach to the underlying disturbance through alleviation of symptoms which tend to impede this, (3) diminution of emotional disturbances resulting secondarily from the symptoms, and (4) favorable modification of the patient's attitudes towards the physician.

In certain psychiatric disorders, symptoms are at the same time etiological agents, so that symptomatic treatment is in itself a curative measure. This is most apparent in combat reactions, in which exhaustion and anxiety arising from battle experiences are both manifestations and causes of the symptomatology. In these cases treatment of exhaustion and fear by heavy sedation as soon as possible after the traumatic episode tends to halt disintegration of the ego and to interrupt neurotic symptom formation, at the same time giving healthy adjustment mechanisms an opportunity to reassert themselves(2, 6, 7, 9). The treatment of "simple" depressions by benzedrine, or of involutional depressions with convulsive therapy, though purely symptomatic in that no attempt is made to treat underlying dynamics, may also be curative.

Symptomatic treatment may be of considerable value in facilitating approach to dynamic issues when this is blocked by the symptoms. In some patients with battle reactions, for example, attempts to think of combat experiences often give rise to intense anxiety with marked overactivity of the sympathetic nervous system. This reaction may be so distressing as powerfully to discourage such attempts. In some of these cases diminishing the autonomic response with mild sedation(8) or ergotamine(7) may enhance the patient's ability to face and work through his upsetting memories, thus greatly facilitating psychotherapy. Fatigue often is accompanied by withdrawal tendencies and unwillingness to make the necessary effort required to meet one's problems. This is combated by measures which counteract fatigue, such as subcoma insulin, which tends to increase the general sense of bodily well-being(3), and atropine, which corrects hypoglycemic fatigue(1). As a result these treatments may be useful adjuncts to more far-reaching psychotherapy.

Symptoms may give rise to emotional reactions which complicate the treatment problem. In such cases palliative remedies by diminishing the symptoms help to eradicate the pathological emotional responses secondary to them. A sick person is always frightened to some extent(10). This anxiety, springing chiefly from fear of permanent disability or death, may be just as strongly aroused by functional disturbance as by organic disease. To the patient a stomach ache is equally menacing whether due to an ulcer or merely to emotional malfunctioning. This fact is frequently overlooked in army practice because the physician is not looking for it and because in his usually brief contact with the patient it is not forced on his attention. Anxiety arising from symptoms is apt to be especially marked among soldiers for several reasons. Being in a period of vigorous young manhood they have not become accustomed to dealing with bodily infirmities. In addition, since most of them have not yet made a mark in life, the possible effects of physical disability on future goals may be of great concern. Illness to a young individual is not only a present discomfort but a threat to future attainment. The menace is the greater because a smaller disability suffices to prevent a man from gaining a certain position than would be necessary to dislodge him from it after it had been attained. A handicap which might not prevent a man from continuing an occupation in which he is well established might well prevent him from making the effort necessary to learn and become successful in that occupation.¹ Finally, anxiety and other disturbing emotions to which symptoms may give rise are heightened in soldiers by certain aspects of the doctor-patient relationship discussed more fully below.

Bodily symptoms and the emotional reactions to which they lead tend to be reciprocally related. The more severe the symptoms the greater tends to be the emotional disturbance accompanying them. This disturbance by further disrupting normal body mechanisms in turn increases the symp-

toms. Thus cardiac palpitation due to anxiety may create a fear of heart disease, increasing the palpitation.

Symptomatic therapy helps to break this vicious circle. For example, symptomatic relief of postprandial epigastric distress may remove the fear of ulcer with consequent improvement in stomach function. Diminution of back pain through physiotherapy by lessening the fear of permanent crippling may promote general muscular relaxation, causing further decline of the pain. Of all psychosomatic symptoms afflicting army patients weight loss seemed to produce the greatest anxiety. Because of this, weight gain resulting from subcutaneous insulin treatment often had a dramatically beneficial effect on the patient's whole outlook: "Regaining weight seemed synonymous in the minds of some patients with the repossession of what they regarded as their personality previous to exposure to the strains of warfare. At the conclusion of treatment some patients exhibited photographs of themselves as they had looked before coming overseas and were delighted to realize that they again looked the same"(3, p. 450).

The use of symptomatic treatment, finally, may favorably modify the patient's attitude towards the physician, with resulting psychotherapeutic benefit. This is particularly true in an army setting where the physician-patient relationship at times enhances emotional disturbances secondary to the patient's illness rather than diminishing them. In private practice a favorable therapeutic atmosphere is created by the attentions of the patient's family and by his faith in his physician. In the Army, not only is there no counterpart of a loving family, but the physician may be regarded almost as an enemy. The soldier's attitude towards his medical officer is colored by his relations with officers in general. If these have been good he tends to be favorably disposed towards the doctor. However, if he has come to resent his officers or to feel that they are not genuinely interested in his welfare, he may approach his medical officer with the same state of mind. Unfortunately, the latter may inadvertently intensify rather than dispel these attitudes. The dispensary physician is usually rushed and may have become bored

¹ Anxiety due to threat of future disability appeared to be especially keen in ambitious Negro soldiers, probably because they tended to have a smaller margin of security than whites(5).

with hearing the same minor functional complaints day after day. He may have come to assume that the soldier with a functional disturbance has come on sick call to avoid some duties rather than because of a genuine complaint. He may therefore be inclined, when faced with an obviously functional disorder, to make only a cursory examination, hand the soldier some pills, and make some remark to the effect that it is all in his imagination, often in a critical tone. Thus the patient's anxiety about himself and need for emotional support may be increased.

The patient with emotionally induced bodily disturbances usually reaches the hospital only after repeated unsatisfactory visits to sick call of this sort, which may have produced several harmful emotional attitudes in addition to resentful feelings towards medical officers. He may have developed the conviction, as the result of his failure to improve, that something is seriously wrong with him which baffles the medical profession.² In addition he may have become habituated to using his bodily symptoms as an attempt to gain attention, a tendency strengthened by his feelings of having been neglected. Finally, he has become committed to insisting on the reality of his complaints. To admit their functional or transient nature would be tacitly to agree that the attitude of the physician was justified, involving a loss of self-respect.

In the light of these attitudes the administration of medication or physiotherapy is a tangible demonstration that the physician is interested in the patient's welfare, that he is genuinely trying to make the patient more comfortable. In order to achieve this result it is, of course, not sufficient simply to prescribe some medication at the first interview. The physician's interest must be continuous, with adjustment of treatment in accordance with the patient's progress. Subcoma insulin treatment illustrates this aspect of symptomatic treatment clearly. The patient is kept in bed part of each day. He sees his physician once or twice in the course

of each treatment and has nurses and wardmen constantly in attendance, coming at once to his bedside if he shows any distress. He receives lunch in bed, with extra portions if desired. Insulin dosage is adjusted each day in accordance with his individual requirements. In short, insulin treatment is accompanied by a reasonable facsimile of the care the patient might expect from his own family and physician. It is a forceful demonstration of the interest of all concerned in his welfare. This aspect alone often had much to do with the patient's favorable progress. One summed it up in the statement: "At last the Army is trying to do something for me." To the degree that the patient becomes convinced he is receiving adequate attention, the need to maintain his symptoms for this purpose diminishes.

Symptomatic therapy is a means not only of demonstrating the physician's interest but of increasing the patient's confidence in him. To the extent that the treatment improves the symptoms, the physician becomes one who can "do something about" his ailment. The removal of a hysterical symptom by suggestion may thus be of more than superficial benefit by giving the patient someone in whom he has faith. Patients tend to be particularly impressed with the physician's ability when they gain weight on insulin after being told this would occur. Even a good night's sleep with sedation following several wakeful ones may increase the physician's standing in the eyes of the patient.

The physician's prestige is especially heightened if he relieves the patient's symptom more or less against his will, as when a hysterical symptom in a patient who resists hypnosis disappears following convulsive treatment. In such cases the physician gains ascendancy by demonstrating that he has sufficient power to intervene in the patient's illness even without the patient's consent.

The patient's confidence in the physician may be adversely affected if he is led to expect complete relief from symptomatic treatment and this is not obtained. He then has an additional source of resentment and distrust. Conversely, partial alleviation of a symptom can be turned to excellent advantage if this is predicted in advance, and

² The profoundly unsettling emotional effects of the belief that the doctors do not understand one's illness were well seen in some patients with schistosomiasis (6).

the failure to achieve complete relief used as evidence that underlying emotional factors, not touched by the medication, are the real source of the symptom. In this way partial improvement can be used to strengthen the patient's belief that the physician understands his condition.

Symptomatic therapy has implications for the physician-patient relationship which may make it easier for the patient to give up his complaints when ready to do so. It does this both by showing that the physician accepts the reality of the complaints and by giving the patient an objective basis for recovery. The disappearance of a symptom without specific treatment for it implies either that it never was genuine or that the physician was able to modify the patient's attitudes in such a way as to cause it to vanish. The first alternative raises the issue of malingering. The second, in that it implies a victory for the physician, may be impossible for a defensive or hostile patient to accept.

By using a tangible remedy the physician convincingly indicates his acceptance of the objective reality of the complaints, thereby permitting the patient to surrender them without raising the question of their genuineness. He can, furthermore, attribute the relief of the symptom to the medication, in this way avoiding an admission that the physician has succeeded in changing his attitudes. In both these ways symptomatic treatment permits abandonment of symptoms without loss of self-respect.

The use of palliative measures, then, may have the paradoxical effect of aiding patient and physician to shift their attention from the complaints to more significant matters. This is especially true if the patient's emotions are strongly involved in the issue of the reality of his symptoms, as occurs very commonly in the Army. Symptomatic treatment, properly handled, deprives him of his *casus belli*, thus under-

mining much of his hostility towards the physician.

In short, symptomatic treatment of functional illness, if used with full awareness of its limitations, may be of definite psychotherapeutic aid. It reassures the patient by demonstrating that the physician is genuinely interested in his condition and can influence it successfully. It circumvents the disturbing issue of the reality of the complaints and enables the patient to abandon them when ready to do so without loss of self-respect. In these ways it improves the patient's relationship with the physician and counteracts anxiety, resentment and other emotional reactions contributing to the severity of the symptoms. The proper use of symptomatic therapy thus tends to diminish the importance of the symptoms and to facilitate rather than hinder more fundamental psychotherapy.

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THE RÔLE OF CONDITIONED RESPONSES IN EMOTIONAL DISTURBANCES OF WAR¹

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I

Despite the large volume of literature that has recently appeared on "war neurosis," little agreement has as yet been reached even as to just what clinical picture is referred to by this term, to say nothing as to its etiology and pathology. At least three factors are responsible for this impasse. First is the idea that "... war circumstances beget no essentially unique or novel psychological phenomena" (1). Secondly, as corollary to this belief, is the assumption that any wartime emotional disorders which cannot be classified as psychoses or as personality disorders, must be manifestations of neuroses, not very different from those encountered in peacetime. Finally, notwithstanding the considerable recognition which the psychosomatic approach has recently received, there has been a marked swing from the physiogenic to the psychogenic point of view in the study of these conditions.

It is the purpose of this paper to examine these ideas in the light of experience gained by the writer as a naval psychiatrist. In that capacity, he was in a position to study marines as well as sailors in various stages of their military careers, from recruit camp to separation from the service. Of particular value for the present study was the experience in naval hospitals with men relatively soon after their combat experiences and at a naval base where many with the diagnoses of "war neurosis" or "combat fatigue" were assigned for varying periods of limited duty.

If we consider only the aliquot parts of the emotional disorders encountered under war circumstances, it is obvious that they do not consist of reactions never before observed in human subjects. However, insofar as the violent stimuli to which individuals are exposed in war are different from any usually encountered in peacetime, the total

picture that they produce is, inevitably, different and novel. Even a casual consideration of the outstanding features of war experiences reveals their violently traumatic and, fortunately, unusual nature. Often, after long periods of boredom, deprivation, discomfort, fatigue and fear, the combatant is subjected to the terrifying sounds of flying projectiles and their deafening explosions, the roars of enemy planes and the cries of the wounded and dying. He sees blinding flashes of light, fires, the frightened running of comrades and the wounds of the maimed. He smells the burning of explosives, steel, the flesh of men and the odors of decomposing matter, some of which used to be human. And he feels not only the heat and the humidity or the cold and the wet, but the violent tremors of the earth or of the ship under his feet as missiles of destruction strike home.

These are violent assaults on the organism which have their peculiar effects depending largely on the physiological properties common to the nervous system of all individuals. In emphasizing this, there is no intention to minimize, much less to ignore, the neurotic reactions depending on the psychological aspects of the personality. What is maintained, however, is that in the previously unstable or psychologically vulnerable individuals, the effects of these violent stimuli account for the differences between the peacetime neurotic pictures and those presented in war. Moreover, they account very largely for the emotional disturbances seen in the war casualties who had previously been essentially stable individuals.

It is to the latter group that Rains and Kolb (2) refer in making the significant contribution to the subject of clearly isolating a clinical picture peculiar to certain combat casualties: "Certainly, all are agreed that the usual psychoneuroses encountered in peacetimes should not be termed 'war neuroses' simply because they occur in a war setting. Removing these, we are left with

¹ The opinions contained herein are those of the author and do not necessarily represent the policy of the Navy Department.

a group of cases which do not conform entirely to the nosological criteria of psychoneuroses, and which can be classified as such only with some difficulty. It is this group of cases in which we are interested, actually presenting more a question of psychoneurotic symptoms in previously stable persons, than of true psychoneurosis." As most characteristic of these cases, they list the following phenomena: (1) The "repetitious catastrophic nightmare" which usually re-enacts the traumatic scene or some part of it. (2) Second in frequency is the "startle reaction," precipitated by sudden, loud noises and consisting of a sudden start accompanied by the physiological evidence of anxiety or manifestations, even, of panic. (3) "A subtle personality change" which consists of moroseness, sullenness and irritability on the part of the patient who becomes silent and withdrawn and often shows a "peculiar vacant staring expression that suggests the affectless facies of the schizophrenic."

While this is an excellent and useful list for descriptive purposes, we are still left in need of further light on the etiology and pathology of this condition. Many have made interesting contributions in these areas but, as Kardiner(3) points out, almost all have looked in the wrong direction for an answer to these questions:

All systems of psychopathology that we have today tend to go in the direction of exploring the social relationships of the human being, and I can tell you, having studied this problem for many years, that it is a fruitless quest to derive the traumatic neurosis from disturbances in social relationships. This neurosis is a disorder of the executive system for action, and hence is a much more primitive reaction than the ordinary hysteria. Those whose neuroses depend upon defects in their social relationships, do not develop this particular kind of reaction. . . . It, therefore, behooves us to look in another direction, and I can only indicate the general direction, in which it may be found; I cannot tell you with any specificity.

I think that the disposition to the traumatic neurosis is to be found in certain types of maldevelopment in the accommodation of the individual to the external world. I have this hunch largely because of some of the most severe cases of traumatic neuroses in which this part of their history seemed affected. What I mean by that is this: As children, these individuals with the traumatic neurosis, do not play like other children. They have a tendency to be over-destructive, which means, in effect, that mastery techniques were retarded. This was the only criterion that I was able to establish in the

childhood of these people who developed traumatic neuroses later.

Though he correctly appraises the errors of others and recognizes the need to look in another direction, the one which Kardiner suggests, as he himself admits, still does not bring us very far. Rains and Kolb(2) suggest another direction when they state:

. . . . Is any group of men so maladjusted that it can produce 75 percent of its number with a neurotic syndrome? Under such circumstances the abnormal becomes the normal, and what at first glance appears pathological may at second clearly be physiological. It is our belief that the psychological mechanisms associated with "traumatic neurosis" are so fundamental as to be present in all men, and are of concern only in determining the extent of the neurotic response, not its content. As a corollary, the precipitating force lies in the personality's environment, hence to some extent is controllable. . . .

Gillespie(4) takes us a long and important step forward in clearly recognizing that there are at least two types of responses to a terrifying stimulus: one depending more on the physiological properties common to the nervous systems of all individuals, and another depending on the psychological aspects of the personality. In doing so, he emphasizes that this does not involve any "unnecessary dualism" but rather that "one type of response is at present describable more in physiological terms and the other in psychological. They can be regarded as occurring at different levels of personality-integration." He cites some excellent clinical examples of the former type of response, but does not undertake systematically, to demonstrate its experimental basis. Moreover, he continues to speak of such responses as psychoneurotic. This is a point of view which the writer believes is not supported by the facts and will be discussed more fully later.

II

The ideal way to study the reactions manifested primarily on the physiological level, would be by laboratory experimentation. Social considerations, of course, make the deliberate development of emotional disturbances in the human subject out of the question. We can, however, learn much from animal experiments dealing with properties of the organism which differ minimally from



those of human beings. It would be of value, therefore, to see what light experimental psychology can throw on our problem.

That a traumatic stimulus causes a disturbance in the organism which we call an emotion, is so much a matter of commonplace observation that it hardly requires experimental proof. It is perhaps less obvious that any stimulus present simultaneously with such a disturbing stimulus subsequently becomes capable of itself arousing the emotional state. This was demonstrated with experimental animals by Warner(5) and by Estes and Skinner(6). The latter showed that a tone which precedes a noxious stimulus becomes an occasion for a state of "anxiety" or anticipation of the disturbing stimulus. Grether(7) reversed the order of the noxious stimulus by first frightening monkeys several times by a powder flash and then exposing them to the sound of a bell. He found that fright responses were evoked which the bell had not previously elicited. This process, described as pseudo-conditioning, is said to consist in a heightened state of excitement which sensitizes the animal to stimuli not normally arousing the response.

Though it is also part of our almost everyday experience, it should be pointed out that conditioned responses may follow from a single experience, if it is intense enough, and need not necessarily be established only after repeated exposures to the stimuli. This was confirmed in the course of his studies on dogs, by Gantt(8).

Another experiment pertinent to our inquiry is one by Prosser and Hunter(9) on the white rat. This demonstrates another form of pseudo-conditioning described as sensitization. In it, auditory stimuli just too weak to elicit startle responses were paired with an electric shock. Excitability was thereby increased to a point at which the reflex response was elicited by the previously ineffective sound.

Hilgard and Marquis(10) describe some still broader properties of not only conditioned responses, but also of reflexes and of complex voluntary responses, as follows:

When an organism has learned to give a conditioned response to a particular stimulus it can be shown that other similar stimuli will also elicit the response even though these other stimuli have

not been used in the conditioning experiment. The partial equivalence of different stimuli in evoking a conditioned response is known as *sensory generalization*. There is also a degree of equivalence among responses which may be called *response generalization*, so that a stimulus which has come through training to elicit a particular response may, under some circumstances, elicit a different response without special training. . . .

The basic facts of stimulus equivalence and of response equivalence are not limited in application to conditioned responses, but are true of reflexes and of complex voluntary responses. Every response is elicitable, not just by one stimulus, but by a class of similar stimuli. Correspondingly, every stimulus elicits, not just one response, but one of a class of responses. . . .

One such more complex form of behavior is the withdrawal response. This, also, has been studied experimentally. From his own work as well as that of others, Estes(11) concludes that, "In addition to a generalized emotional reaction, a disturbing stimulus usually arouses a withdrawal response, R^w . It has been shown . . . that R^w becomes conditioned to any stimulus which is contiguous with the disturbing stimulus. . . ."

III

Let us now return to the symptoms enumerated by Rains and Kolb and subsequently confirmed by others(12, 13, 14, 15) as most characteristic of the syndrome variously designated as "operational fatigue," "combat fatigue," "subacute emotional disturbances induced by combat," "mild anxiety states," etc. Though not usually listed first, the startle reaction is really the key to an understanding of this condition.

Studies have been cited(5, 6, 7) which show such a response, associated with anxiety and fear, may be evoked not only by some noxious stimulus directly, but by other stimuli which had been temporally contiguous with the noxious ones on one(8) or more occasions. Moreover, the phenomenon of sensitization(9) accounts for the fact that the contiguous stimulus need not itself be a strong one, but may be one that had previously been quite ineffective in eliciting the conditioned response. Thus, the sound of a slammed door, of a fallen book, a flash of light, a sudden cry or movement or a friendly slap on the back may produce a violent startle reaction and emotional re-

sponse in an individual who had previously experienced similar stimuli in association with emotionally traumatic events.

Furthermore, the phenomena of sensory generalization and of response generalization of complex voluntary behavior as well as of reflexes and conditioned responses, largely explain the almost infinite variety of ordinarily innocuous everyday experiences which may be a source of physiological and emotional disturbances to one who had lived through terrifying war events. They account, when in a crowd of people, for the anxiety encountered in the sailor, who, on one or more occasions, was a member of a group of shipmates crowding toward the only avenue of escape from a compartment of a ship that was sinking; or in the marine who through months of training and experience had learned the dangers of concentration of personnel during military operations. On the other hand, the same principles make understandable the need for human companionship on the part of the fighter pilot whose most poignant experience on a dangerous mission was his overwhelming sense of loneliness. Again, the sight of people running or even walking rapidly may arouse feelings of uneasiness or more strongly unpleasant emotions in the man in whom fear of impending danger had been associated with the sight of his shipmates running to battle stations or away from impending catastrophe. In one man, even the state of feeling "hot and sticky," while on a naval base in the southern part of this country, was a source of anxiety reminiscent of a similar feeling experienced so frequently in the battle areas of the South Pacific.

In some introductory remarks to two case histories, Hastings *et al.* (16) state:

The following two records represent cases of functional symptoms which developed after an unusually terrifying experience. In this type of case the individual appears to become conditioned to react in a neurotic-like fashion under the impact of this one terrifying experience. Under similar circumstances it is probable that the average individual would be conditioned to react in a neurotic manner. . . .

They then describe the experience of a tail gunner in a B-17 whose tail section was sliced off at about 20,000 feet, during a practice mission. He kicked his way through

the skin of the ship and at about 1000 feet was blown clear. He had time to get his parachute open and came down unharmed. Some of his subsequent symptoms are described as follows:

. . . . For the following two days he couldn't eat. Since the accident he has felt tense, anxious and restless. He sleeps poorly and has frequently recurring dreams of plane crashes. He has difficulty in getting thoughts of crashes off his mind and little things remind him of it. He develops anxiety on getting into the forward section of a B-17 because it reminds him of the terrible experience his fellow crew members must have gone through before the crash killed them. Whistling and whining noises startle him because they remind him of the wind whistling through the jagged tail section as it fell from the wreck. Small enclosed spaces also produce a certain amount of anxiety. The nights when he is alone are his worst time. He feels better in the day when he can talk to other people and have their company. He has developed severe anxiety attacks on riding in planes since the accident and says he sits listening to the creaking of the plane waiting for the tail section to break off again.

Grinker and Spiegel (15) summarize some of their observations on patients whose conditions they designate as mild anxiety states, as follows:

An interesting feature of these anxiety states is the high degree of specificity of the symptomatology to the most traumatic factors in their battle experience. Those who have withstood prolonged dive bombing and strafing from the air, are intolerant of all aircraft, and in the worst cases, of the sounds of any motor. Even a passing truck will produce marked anxiety and a tendency to look for cover. The knowledge that all aircraft in the vicinity of the hospital are friendly planes is of no comfort. The patient reacts automatically to any plane overhead with fear and suspicion and seems to be continually listening for the sound of an airplane engine. On the other hand, those who have experienced adequate support from the air on the part of their own planes but have been subjected to heavy fire from artillery and mortar shells, have no fear of planes, but cannot tolerate sudden loud noises, such as dropping of a dish, or the banging of a door. For those who have had mortar shells land very close by and have seen the flash of the explosion followed by the concussion, almost any sudden stimulus will produce the fear and startle reaction. Especially is this true of sudden flashes of light, such as the striking of a match or a cigarette lighter, or the opening of the blinds in such a way as to flood the room suddenly with light.

It is apparent, therefore, that in such an individual almost every sound, sight or other sensory stimulus may be an actual or potential source of anxiety. He is almost con-

stantly tense and on the alert to anticipate these stimuli. In other words, he is irritable. Invariably, his fondest wish is to retire to a farm. When he cannot do this, he becomes sullen, morose and withdrawn. The latter reaction, as Estes(11) demonstrated, has an even more direct relationship to exposure to disturbing stimuli. Thus we can see the basis for the development of the "subtle personality change."

The vacant stare and affectless facies which these patients often present may be regarded as a manifestation of the same perseverative phenomenon, while the patient is awake, which is manifested by the catastrophic dream while the patient is asleep. The fact that, unpleasant as they are, the patient cannot control his ruminations recapitulating traumatic events, suggests that these are on a physiological level. However, whatever the basis for his frequent preoccupation with traumatic events, there is little doubt that the patient's vacant staring facial expression is intimately related to them.

The recurrent catastrophic nightmare, Gillespie(4) believes, can be attributed to an "automatic activity of a neural engram at a time when, as in sleep or in epilepsy, the inhibitory effect of the cortical activities is in abeyance." He cites an observation of Penfield and Ericson(17) suggesting that a traumatic event may persist in an engrammatic fashion. This observation concerns an epileptic girl who had a frightening experience at the age of 7 and afterward had nightmares re-enacting the traumatic scene. At the age of 11 she began to have epileptic seizures with fright followed sometimes by major convulsions. While she showed the fright, she had hallucinations reproducing the original traumatic experience. Electrical stimulation of the middle temporal gyrus exactly reproduced the hallucination. This leads the authors to "... surmise that the same set of neural communications which was established that day in the meadow had served for memory, for 'nightmare' and for seizure. . . ."

IV

We come now to the question as to the name to be applied to this condition. For reasons evident from the foregoing, neither

"war neurosis," "traumatic neurosis" nor even "combat fatigue" is any more satisfactory as a name than is the term "shell shock" of World War I. That it is not merely a matter of fatigue that is involved, is obvious. Moreover, while the condition occurs most frequently among combatants, it is not entirely limited to them(18). Kardiner(19) has used the term "physioneurosis" which places the emphasis on the physiological aspects of the condition. But the applicability of the idea of "neurosis" to this condition requires further consideration.

The concept of motivational conflict, as Masserman(20) has stated it, "is explicit or implicit in almost all dynamic theories of the etiology of neuroses in the human." While it is true that, in the combatant, conflict between military duty and the drive for self-preservation is frequently present, it is doubtful whether it is operative in every individual every time that he is the victim of a traumatic experience which precipitates the syndrome under discussion. It is not present even in the combatant, to take an extreme example, at the moment that he is awakened from sleep by a violent explosion and certainly not in the civilian who suddenly finds his home collapsing around him. Goldstein(21) recognizes the difference in this respect between the true neuroses and the wartime emotional disorders we have considered, in the statement: "In contrast to ordinary neuroses, in which the inner conflict is of essential importance, the war neurosis depends primarily upon the intrusion of unwonted dangers and of the difficulty or impossibility of adjusting to them."

Finally, we have seen that analogous reactions are elicitable in experimental animals entirely without the presence of motivational conflict as a necessary factor. It can therefore be said that, from the point of view of etiology, the disorder under consideration should not, strictly speaking, be called a neurosis.

From the point of view, also, of pathology, these disorders do not properly fit in the category of the neuroses. This may be anticipated from the often repeated observations that no personality structure common to all these cases has ever been found and that "men of reasonably sound personality

may break down if the strain is severe enough" (21), while many a man showed no evidence of a "traumatic neurosis" after combat experiences, though his old psychoneurosis had become aggravated. On the more positive side, moreover, we find that none of the symptoms which make up the syndrome under discussion, have the permanency of those of the true neuroses. In fact, relatively early recoverability may rightly be considered one of the criteria for the diagnosis of this condition. Goldstein (22) summarizes the differential points of the psychopathology involved as follows:

In the light of the foregoing evidence "nervous breakdown" due to war events differs from genuine neurosis. It is characteristic of a neurosis that at the center of the illness there is a personality change that hinders the individual from eliminating the escape mechanisms built up as a protection against danger and anxiety. The anxiety states observed in war are acute conditions of catastrophe that show the direct reactions to the situations of danger and that clear up if the latter is eliminated. . . .

Thus I would say: there are symptoms due to war events that have the characteristics of reactions to be observed in neurotics. . . . But they are not neuroses, because there is usually no permanent personality change and so no fixation of symptoms takes place. . . .

Finally, the therapeutic test, so to speak, of "deconditioning" applied with reported good results by McLaughlin and Millar (23), Schwartz (24), and by Saul *et al.* (25) strongly supports the position that we are not dealing here with a true psychoneurosis. These authors have used recordings of combat noises or sound motion pictures of battles as adjuncts to psychotherapy of "war neuroses" and attribute much of their success to the "desensitizing" effects which they were thereby able to achieve.

CONCLUSIONS

Much of the literature on this subject attests to the difficulty that many observers have in considering as a true neurosis the "war neurosis" as described above. Part of the difficulty in understanding this condition lies in its superficial resemblance to a true neurosis. Another source of confusion is the fact that the group of symptoms we have discussed often does not occur in an isolated form, but may be incorporated with a large

variety of other emotional disturbances. The former is not easily separable from the underlying emotional disorders because of this very similarity not only to a true neurosis but to some aspects of many other conditions.

The term "combat fatigue" has been suggested with the awareness that it, also, has its shortcomings in that it emphasizes the element of fatigue which may be only one of several factors involved in the production of the symptoms. From the foregoing discussion it is evident that neither the combat nor the fatigue are even necessary elements in the development of this condition. The writer, therefore, would like to suggest the term, "traumatic neurotoid state" in its stead. This name does not classify the condition as a neurosis, but at the same time indicates its resemblance to it. Moreover, the traumatic factor, which is definitely more significant in the etiology than the fatigue, is emphasized and the connotation of more permanent emotional instability is avoided.

SUMMARY

1. The failure of agreement on several aspects of the emotional disturbances of war is cited and some factors considered responsible for this impasse are listed and examined.

2. The rôle of violent stimuli of war conditions on the nervous system is emphasized and their significance is considered in the light of experimental studies of conditioned responses.

3. The resulting symptoms in previously stable individuals is discussed, and the name, traumatic neurotoid state, is suggested for the picture presented.

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A RAPID PERSONALITY EVALUATION

BASED ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY AND THE CORNELL SELECTEE INDEX¹

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Physical development was the prime factor in the selection of men for military service during wars of earlier days. At the turn of the century and especially during the period of World War I, attention was focused on intellectual capacity and as a result, various intelligence tests and modifications have been developed to aid in selection. During the era of industrial expansion and specialization following the last war, it became apparent that physical fitness and intellect alone were not sufficient criteria for success in a particular specialized skill or profession and, consequently, numerous aptitude tests have been devised to aid in vocational guidance and proper selection of students for the professions. During the present war, especially when our attention has been directed to the high rate of neuropsychiatric rejections and casualties, the importance of emotional adjustment gained recognition. It became increasingly evident that an emotionally maladjusted individual, regardless of his physical stamina, intelligence and skill, was a handicap not only to himself but a burden and a bad influence on the group of which he became a part.

A number of personality tests were developed to detect potential neuropsychiatric casualties, some rather limited in scope and application and others more comprehensive. The most widely acclaimed were: the Rorschach Test(1), about which a great deal has been written in the literature, the Minnesota Multiphasic Test(2), and the Cornell Selectee Index(3). The first is undoubtedly a valuable test, although some unwarranted interpretation has been attached to certain phases of it. It is not a group test and requires expert training for its administra-

tion and interpretation. The Minnesota Test is much simpler to administer and score, but it too does not lend itself to group testing and is time consuming. The Cornell Test is a definite improvement in the direction of simplification, group applicability and time economy.

PURPOSE

At the time our investigation began in 1943, we were not aware of the Cornell Test and the group Rorschach Test of Harrover-Erickson(4). However, after employing the Minnesota Test for some time on psychiatric wards, we felt that it could be modified to make it applicable to group testing and that the time required in its administration and grading could be reduced. It was our task to evolve a simple qualitative and quantitative personality evaluation that would take as little time as possible to administer and score, that would have a high rate of specificity and screening power, and that could be used by large groups.

METHOD

A perusal of the test cards of the Minnesota Test revealed that there was an appreciable amount of duplication in the test statements of each scale and overlapping of statements that applied equally well to two or more scales. The statements deemed by us to be most specific for each scale were then selected. Of these, ten statements were allotted to each scale including the validity and lie scores; making a total of one hundred statements for the entire test, to facilitate scoring on a percentile basis. The ten scales comprising the personality profile were:

- F—validity score.
- L—lie score.
- D—depression.
- Hy—hysteria.
- Pd—psychopathic deviate.
- Mf—masculinity-femininity.
- Pa—paranoid trend.
- Pt—psychasthenia.
- Sc—schizoid traits.
- Hs—hypochondriasis.

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The sum of the scores constituted the T score, which is the total score, indicative of the degree of emotional maladjustment. The Mf scale as in the Minnesota Test was not a test for sexual trends, but merely for the determination of masculine and feminine interests. For females, the score was determined by subtracting the score attained on the Mf scale from ten.

Even after this careful selection of the one hundred statements submitted to a test group, seventeen statements failed to indicate a definite trend in any direction. For example: the lie statement, "If I could sneak into a movie without paying, I would do so" was checked to be true by 426 persons and false by 574 persons. Statements of this type were dropped and replaced by others devised by the author. After fifty were submitted in

The statements were mimeographed in the order outlined in the form of a true and false test. A marker was made of discarded x-ray film in which holes were punched to correspond to statements opposite to the majority trend. Thus all circled T's or F's which corresponded to a hole in the marker were red-penciled and a count of these dots gave the T score.

The test subjects were drawn chiefly from personnel of the Pocatello Army Air Field, the Pocatello Naval Munitions Plant, and students of the University of Idaho. These represented a cross section of population from all geographical locations of the United States, both urban and rural; most educational levels; a variety of occupations; and varied social and economic backgrounds. For distribution of the group, see Table 1.

TABLE 1
DISTRIBUTION OF PERSONNEL TESTED

Normal male		Normal female		NP male	
Bomb group air and ground crews...	640	College students....	53	Army General Hospital...	47
Marine soldiers and Navy officers...	86	Officers' wives.....	33	Veterans Hospital.....	45
Fighter pilots.....	63	Nurses.....	13	Army Air Field Hospital..	8
Medical Corps soldiers and officers...	54	Civilian employees..	10		
College students.....	48				
Total.....	891		109		100

a test to 100 students at the University of Idaho (with the cooperation of Professor Oscar Kaplan, head of the department of psychology), the most specific ones indicating a definite trend were chosen.

The statements were arranged in numerical order, so that each first, eleventh, twenty-first, etc., belonged to the validity score; each second, twelfth, twenty-second, etc., represented the lie score; each third, thirteenth, twenty-third, etc., the depression scale, etc., for the rest of the test. Each statement could thus be identified at a glance by its last digit for ease in plotting the profile. The validity and lie scores were included in the total score, since they in themselves indicated trends in personality. The (?) scale, which was part of the validating scales in the original Minnesota Test, was dropped, since it was found that it merely encouraged indecision and hedging without adding any worthwhile information.

One hundred known neuropsychiatric cases were also subjected to the test. These were chiefly patients of the Gardiner General Hospital at Chicago, Veterans Administration Facility at Lexington, Kentucky, and some from our own service at Pocatello. The diagnostic distribution is shown in Table 2.

After we became acquainted with the Cornell Test (through the courtesy of the authors who kindly sent us copies), we felt that the ten "stop" questions would give additional valuable information, with almost no increase in writing and scoring time. We therefore incorporated these in our test given to the neuropsychiatric group. We substituted, however, a statement pertaining to sexual psychopathy for one of the two "stop" statements in the original Cornell Test pertaining to alcoholism. We had no opportunity to try the "stop" questions on the normal group, inasmuch as the bulk of it

TABLE 2
DIAGNOSTIC DISTRIBUTION OF NP CASES

Psychoses		Psychoneuroses		Psychopathies		Miscellaneous	
Schizophrenia							
Paranoid.....	15	Anxiety state.....	8	Inadequate personality.....	3	Postconcussion syndrome.....	3
Hebephrenic.....	4	Mixed.....	4	Homosexuality....	4	Skull fracture residual.....	1
Simple.....	4	Hysteria.....	4	Emotional instability.....	1	General paresis...	1
Mixed.....	3	Reactive depression..	3	With alcoholism..	1	Multiple sclerosis	1
Catatonic.....	1	Combat reaction....	3	Unclassified.....	5	Simple adult maladjustment	2
Unclassified.....	1	Neurasthenia.....	1			Mental deficiency	1
Manic-depressive		Hypochondriasis....	1			Undiagnosed.....	9
Depressed.....	4	Unclassified.....	1				
Manic.....	2						
Involuntal melancholia.....	1						
With constitutional psychopathic state	3						
With epilepsy.....	2						
Alcoholic.....	1						
Unclassified.....	2						
Total.....	43		25		14		18

TABLE 3
T SCORES OF NORMAL MALES, NORMAL FEMALES, AND NP MALES
M = Median Group

T scores	Normal male		Normal female		NP male	
	No. of persons	Percent	No. of persons	Percent	No. of persons	Percent
0 to 2.....	0	.0	0	.0	0	0
3 " 5.....	3	.3	0	.0	1	1
6 " 8.....	20	2.2	0	.0	0	0
9 " 11.....	65	7.3	0	.0	2	2
12 " 14.....	155	17.4	8	7.3	3	3
15 " 17.....	196	22.0	17	15.6	2	2
18 " 20.....	149 M	16.7	30 M	27.5	2	2
21 " 23.....	115	12.9	18	16.5	7	7
24 " 26.....	83	9.3	16	14.6	11	11
27 " 29.....	43	4.8	11	10.1	10	10
30 " 32.....	23	2.6	4	3.7	10	10
33 " 35.....	12	1.3	5	4.6	11 M	11
36 " 38.....	14	1.6	0	0.0	10	10
39 " 41.....	5	0.5	0	0.0	4	4
42 " 44.....	6	0.6	0	0.0	5	5
45 " 47.....	0	0.0	0	0.0	4	4
48 " 50.....	0	0.0	0	0.0	8	8
51 " 53.....	0	0.0	0	0.0	5	5
54 " 56.....	0	0.0	0	0.0	0	0
57 " 59.....	1	0.1	0	0.0	2	2
60 " 62.....	0	0.0	0	0.0	0	0
63 " 65.....	0	0.0	0	0.0	1	1
66 " 68.....	0	0.0	0	0.0	0	0
69 " 71.....	1	0.1	0	0.0	0	0
72 " 74.....	1	0.1	0	0.0	0	0
75 " 77.....	0	0.0	0	0.0	1	1
78 " 80.....	0	0.0	0	0.0	0	0
Total.....	891	99.8	109	99.9	100	100.0

had already departed for overseas duty. Nor did we have occasion to subject female neuropsychiatric cases to the test.

ANALYSIS OF DATA

Credit is due to the enlisted men of the medical detachment of the Pocatello Army Air Field for a great deal of the tedious work required in the scoring of the test

standard deviation of 7 as for the male group, and thus the normal range for women could be assumed to be from 13 to 27. The neuropsychiatric group had considerably higher T scores, the median average being 34 with a standard deviation of 13. The T scores of all three groups are shown in Table 3 and graphically illustrated in Fig. 1. Inasmuch as the standard deviation would include

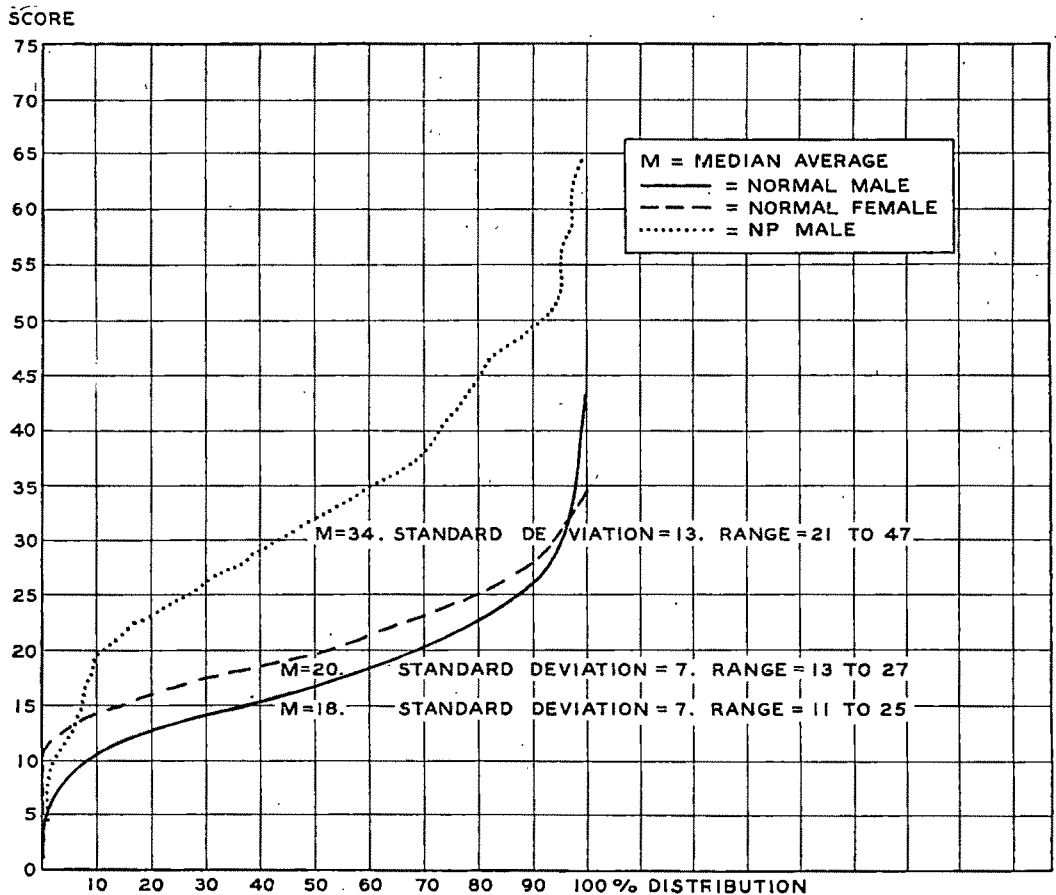


FIG. 1.—Distribution of T scores in normal males, normal females, and NP males.

papers and assistance in tabulating the data; and to Benjamin Greenstein, research analyst of the Illinois State Employment Service, for aid in statistical analysis.

An analysis of the T scores attained by the normal male group showed a median average of 18, and the standard deviation was computed to be 7. Thus the normal range could be assumed to be from 11 to 25. The normal female group scored slightly higher, showing a median average of 20, the same

about two-thirds of the normal group and twice the standard deviation, 95 percent of the group, it can be assumed that for males a score below 25 would be within the normal range; between 25 and 32 probably borderline or mild emotional maladjustment; and over 32 indicative of definite psychopathology. In females the range would be two points higher.

The median averages of each of the scales were also compared and are shown in Table 4

and graphically illustrated in Fig. 2. In general, the scores of the normal male and female groups seem to run parallel, except for a few variations. Men showed a somewhat greater tendency to psychopathic deviation and paranoid trends, while women scored higher in hysteria, psychasthenia and hypochondriasis. They also scored higher than men in the Mf scale, indicating that women show greater inclination toward masculine interests than do men toward women's interests.

The scores of the neuropsychiatric group exceeded those of the normal group in every scale except the Pd scale. Thus this test serves to detect potential neuropsychiatric

neuropsychiatric cases, in spite of the apparent weeding out process before debarkation. It is probable that a large proportion of breakdowns overseas came from this group. However, our normal group was tested chiefly for the purpose of standardization of our test rather than for the determination of screening power.

Of the 100 neuropsychiatric cases, 85 percent were screened by means of the "stop" questions alone, showing the remarkable value of these questions. Inasmuch as the Cornell group obtained the same degree of screening with their whole tests, it casts some doubt of the value of the rest of their test. Seventy-five percent were screened by

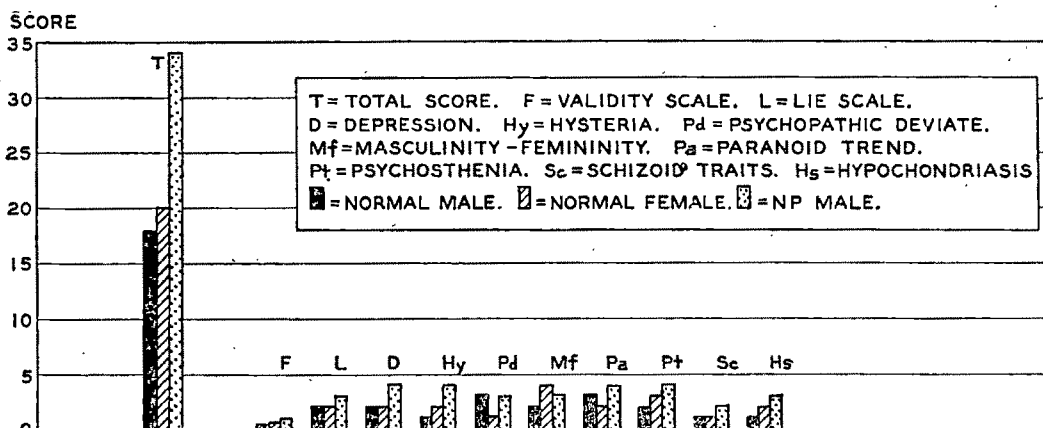


FIG. 2.—Median average T scores, and profile scores of normal males, normal females, and NP males.

cases by means of the T score and the personality profile scales.

A check of the normal group, based on the first fifty questions only and doubling the score, showed similar T scores and profile patterns, the median variation being about three points from the complete test. Thus when time is at a premium, a rough approximation can be obtained by employing only half of the test. This, however, is not generally recommended, inasmuch as the total time of testing is not too excessive.

Of the presumably normal sample of 1000 cases, 75 percent had normal T scores. No "stop" questions were employed in this group. A follow-up could not be made on the remaining 25 percent since the bulk of the personnel tested had departed for overseas duty. One cannot say how many of these were neuropsychiatric or potential

the T scores alone. Since 5 percent of those having high T scores scored zero on the "stop" questions, 90 percent could be screened by means of the T score and "stop" questions (about one minute time to score). Four percent of the remainder having low T scores and no response to "stop" questions had significant pathological profile patterns. Thus an additional 4 percent of neuropsychiatric cases could be detected by means of the personality profile, and by employing the entire test (about five minutes scoring time), 94 percent of neuropsychiatric cases could be screened.

We made no attempt at statistical analysis of the individual neuropsychiatric diagnostic classes, due to the small size of these groups. The following observations, however, are significant: of 25 psychoneurotics, 16 scored above median average on the F scale, 24

on the D scale, 23 on the Hy scale, 18 on the Pt scale, 16 on the Sc scale and 22 on the Hs scale. This indicates a marked tendency on the part of psychoneurotics to depression, hysteria and hypochondriasis and a moderate tendency toward psychasthenia and schizoid trends. Of 43 psychotics, 34 scored above median average on the F scale, 28 on the L scale, 35 on the D scale, 40 on the Hy, 30 on the Pt, 30 on the Sc and 32 on the Hs, thus showing a marked tendency to hysteria and depression and a considerable leaning toward hypochondriasis, psychasthenia, schizophrenia and confabulation. Of 15 paranoid schizophrenics, 13 scored above median average on the Pa scale. Of 14 psychopaths, 9 scored above median average on the Pd scale. All 4 cases diagnosed hysteria scored high on the Hy scale. Of the 4 depressed manic-depressive psychotics and 3 reactive depressions, 6 scored above median average on the D scale. All depressed manic-depressive cases scored high above median average on the D scale.

As a general observation, although no actual timing has been attempted, normal subjects completed the test in about fifteen minutes. Psychoneurotics took more time and psychotics considerably longer, even as much as one hour. This is probably due to blocking and psychasthenic trends in the former and preoccupation and retardation in the latter. Many erasures and write-ins also were presumptive of neuropsychiatric conditions.

COMMENT

That every neuropsychiatric casualty discharged from service costs the government \$30,000 has become a trite statement; nevertheless, it is a sad fact. More important is the morbidity and loss of productivity of potential neuropsychiatric cases who in the civilian niche they had carved out for themselves, might have been useful and comparatively contented citizens; some might even have achieved success in their chosen fields in spite, or because, of their idiosyncrasies. Thus every neuropsychiatric case screened prior to induction represents an asset. Of course, in spite of careful selection, the most hardened and best adjusted soldiers will break down under the stress of combat,

and the greater of ferocity of battle the greater will be the number of psychiatric cases. However, the recuperative powers of this group are definitely greater than in men having a previous background of maladjustment. On the other hand, some men with known neuropathic traits have been found to withstand the strain better than those who had never displayed emotional weakness. These facts, however, are no more an argument against attempts at screening than is an expected degree of mortality in post-operative carcinoma a cause for abandoning surgery in early malignancy. Had we abandoned selection altogether, our number of casualties would be infinitely greater than it is at present.

It is quite probable that borderline and mild neuropsychiatric cases could perform useful non-combat duty if properly assigned, but more pronounced cases of emotional maladjustment have no place in a regimented military setup.

Some naively wonder why we should choose the cream of our manpower to break down and die in battle. These people fail to realize that we choose our best men to kill and win, and not to be killed; and our chances of winning are much greater with our most stable men than with our "weak sisters."

The advantages of our test over the original Minnesota Test are obviously that ours takes less time and effort and it lends itself to group administration. Its advantages over the Cornell Test are that it evidently has somewhat greater screening power, furnishes a qualitative as well as a quantitative evaluation by means of the profile pattern, and provides a check on validity. In addition to its use for screening before acceptance into military service, it may be of value in selection of flying personnel, pre-employment examinations, checking progress of neuropsychiatric patients, and as an aid in differential diagnosis in some instances. The test should not be used to replace a psychiatric interview.

Obviously the test is not suitable for illiterates or low grade mental defectives. To screen the latter, the Kent Emergency Test, which takes only a few minutes, is suggested.

It would be interesting and informative to

try our test as well as the Cornell Test and the group Rorschach Test on larger, equal samples of normal population and known neuropsychiatric patients of both sexes to compare the merits of each.

CONCLUSIONS

1. A personality evaluation, based on the Minnesota Multiphasic Test and the Cornell Selectee Index, has been devised for rapidity and ease of administration and scoring.

2. It gives a qualitative and quantitative estimate of personality maladjustment, lends itself to group testing, and can be administered and scored by personnel with secondary education and limited training.

3. It has a high screening power—above 90 percent.

4. It may be used for screening at induction stations, selection of flying personnel, pre-employment examinations, checking progress of neuropsychiatric patients, and as an aid in differential diagnosis in some instances.

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TEST FORM

The following statements are intended to indicate your interest and attitudes. This is not an intelligence test, and there are no right and wrong answers.

Draw a circle around "T" if the corresponding statement is true and around "F" if it is false. If you are not sure, guess.

1. T F My neck spots with red often.
2. T F I like to be praised by my superiors.
3. T F I enjoy many different kinds of play and recreation.
4. T F I have never had a fainting spell.
5. T F I have used alcohol excessively.
6. T F I would like to be a nurse.
7. T F My parents were generally reasonable in making me obey.

8. T F I easily become impatient with people.
9. T F Peculiar odors come to me at times.
10. T F The top of my head sometimes feels tender.
11. T F My soul sometimes leaves my body.
12. T F I do not always tell the truth.
13. T F I usually feel that life is worth while.
14. T F I enjoy detective or mystery stories.
15. T F I have very few quarrels with members of my family.
16. T F I am interested in the latest fashions in clothes.
17. T F I feel that I have often been punished without cause.
18. T F I don't like to study about things I am working at.
19. T F I have never been in love with anyone.
20. T F I often have feelings like burning, tingling or crawling.
21. T F I am not afraid to handle money.
22. T F I do not like everyone I know.
23. T F I brood a great deal.
24. T F I am worried about sex matters.
25. T F My comfort comes before that of others.
26. T F I like mechanics magazines.
27. T F I have had more than my share of things to worry about.
28. T F I forget right away what people say to me.
29. T F I dislike having people about me.
30. T F I have a great deal of stomach trouble.
31. T F It does not bother me particularly to see animals suffer.
32. T F Sometimes I put off until tomorrow what I should do today.
33. T F I do not worry about catching diseases.
34. T F Many people exaggerate their trouble to gain sympathy.
35. T F I would rather enjoy the present than plan for a future.
36. T F I am not interested in science.
37. T F I have no enemies who really wish to harm me.
38. T F Unimportant thoughts sometimes bother me for days.
39. T F Most of the time I wish I were dead.
40. T F I am usually calm and not easily upset.
41. T F I get angry sometimes.
42. T F I would rather win than lose in a game.
43. T F Once in a while I laugh at a dirty joke.
44. T F When in trouble I keep my mouth shut.
45. T F I have very few fears compared to my friends.
46. T F I never liked to play with dolls.
47. T F I am sure I am being talked about.
48. T F I get upset when I have to make a short trip away from home.
49. T F I often feel as if things were not real.
50. T F I often feel pain in the back of my neck.

PSYCHOSOMATIC DERMATOLOGICAL SYNDROMES IN MILITARY SERVICE

OBSERVATION OF TWENTY-SIX CASES

DANIEL J. SULLIVAN, LT. COL., M. C., A. U. S., AND EUGENE S. BERESTON,
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The functional background of certain dermatoses has been well established in the past. Experience with these cases in the Army demonstrates clearly the importance of situational and environmental stress as etiological factors in precipitating original attacks or recurrences in predisposed individuals.

The functional dermatoses included in this study are disseminated neurodermatitis, urticaria of psychogenic origin, localized and generalized pruritus of functional origin, and hyperhidrosis. In each case, the so-called organic etiological factors were excluded by complete allergy study (scratch tests, patch tests, and elimination diet); search for possible foci of infection (teeth, tonsils, sinuses); general physical examination including urinalysis, complete blood count, serology, chest x-ray and any additional procedures that might have been appropriate in specific cases, such as proctoscopic examination in cases of pruritus ani, etc. We agree with Becker(1) that these skin conditions are psychosomatic phenomena exactly similar to psychosomatic symptoms occurring in any other organ-group, *i.e.*, gastro-intestinal tract, cardiorespiratory apparatus, etc. The "organ selection" in any particular case of any psychosomatic syndrome is often difficult to evaluate, but the fact that the etiology of a certain case is primarily psychogenic is often relatively easy to detect.

Disseminated neurodermatitis (atopic dermatitis) of adults manifests itself in the form of erythematous diffuse pruritic macular and papular areas of dermatitis appearing on the face, neck and flexor areas of the body chiefly, but may appear in any other areas or be generalized in the acute or subacute stages. In the more chronic cases, lichenification with pigmentation often occurs. This condition has been found to occur chiefly in individuals with psychoneurotic tendencies or frank psychoneurosis; psychiatric evalua-

tion of our cases shows this to be true. Brunsting(2), Miller(3), Becker(1), Van De Erve and Becker(4), Stokes(5), Greenhill and Finesinger(6).

Urticaria of psychogenic origin appears in predisposed individuals in adverse environmental situations in the form of wheal-like lesions localized or generalized in character and in some cases associated with angioneurotic edema. In such individuals, mere mention of the unfavorable situational factors may cause an abrupt outbreak of urticarial lesions within a few minutes (see case 17). All urticarial cases in this study developed multiple wheal-like lesions of localized or generalized distribution when the etiological functional factors were brought into play either accidentally or deliberately. Stokes, Kulchar and Pillsbury(7), Menninger and Kemp(8), Hopkins, Kesten and Hazel(9), Fink and Gay(10), Oberndorf(11).

Pruritus of generalized and localized distribution may be either organic or functional in origin. The functional cases, once the etiology has been so determined, are difficult to cure because they are usually of the obsessive-compulsive personality type, rigid, on the defensive, not readily amenable to suggestion and reassurance, and usually require prolonged psychiatric treatment. Hailey and Hailey(12), Becker(1), Stokes(5).

Hyperhidrosis, particularly of hands and feet, has long been considered due to an autonomic nervous system imbalance resulting from an anxiety-tension state. Disregarding the other dermatoses of psychogenic origin in which hyperhidrosis was often a symptom, we have seen a number of cases of hyperhidrosis sent in for study of the autonomic nervous system. Careful examination of the sympathetic nervous system revealed no gross abnormalities; but psychi-

atric examination brought to light the underlying anxiety state which is the characteristic finding in most of these cases (see case 12).

DISCUSSION

The four conditions (neurodermatitis, urticaria, pruritus and hyperhidrosis) as described above might be termed psychosomatic dermatological syndromes. It is probable that those cases of neurodermatitis beginning in infancy or in childhood are reflex symptom-complexes which originally started as allergic phenomena but later became non-specific and would be set off by psychogenic unrest. We know that other allergic syndromes, such as asthma, originally are specific in that they occur in response to the specific allergen but later the attacks often occur from emotional factors. Hyperhidrosis is one of the commonest symptoms of anxiety states. We know that any one of the usual symptoms of an anxiety-tension state may be predominant in a certain individual patient; one patient may show chiefly tremulousness; another, restlessness; another, tachycardia; and another, hyperhidrosis of axillae or hands or both (see case 13). Urticaria of psychogenic origin is a reflex symptom-complex similar to neurodermatitis. In some cases, the original attacks of urticaria had been on an allergic basis but subsequent attacks have been shown to be purely psychogenic.

Others have shown that the psychogenic factors which cause the psychosomatic dermatological syndromes occur in civilian life and more commonly in certain personality types, and skin symptoms appear when they are placed in stressful environmental situations. It is our opinion that the cases described above are on a similar basis except for the difference in environment peculiar to military service. It is our feeling that military environment is even more prone to initiate or aggravate psychosomatic dermatological conditions (neurodermatitis, urticaria, pruritus, hyperhidrosis). Our cases show very clearly that with a definite history or the actual presence of these conditions before induction there is a high probability that disabling flare-ups or aggravation will occur in military service. For this reason we would recommend that the psychosomatic dermatological syndromes be considered unsuitable

for military service, and such persons should not be inducted.

Environmental stress in military service is in general much more severe than in civilian life. One of the most difficult situations is that of being subject to authority, which means that there is little possibility of showing resentment or refusing to carry out orders, since insubordination is not tolerated in military service. In civilian life, it is often possible to express resentment directly to a superior or refuse to carry out his orders. If this occurs, the most that can happen is that the individual may be dismissed from his position or he may quit. In the Army however, he faces severe punishment. Therefore this resentment is suppressed under the surface for a while and then the aggression "breaks out" either in an episode of unusual behavior or symbolically in a psychosomatic dermatological syndrome. Another disturbing environmental situation peculiar to military service is the assignment of a man to work that he dislikes. In civilian life he can choose his work freely but in military service it is obvious that military necessity comes before personal desire, and in many cases the man is assigned to a job he dislikes or actually detests. In such a situation it is an effort for him to produce a good quality of work, and often the hours are long and the circumstances and physical environment of the job are unpleasant. This situation occurred in many of our cases, particularly those who were initially in the Army Specialized Training Program, doing college work in subjects of their choice and for which they had aptitude, and then were transferred to ordinary field duty; subsequently, they developed increasing resentment and frustration which ultimately spilled over into the psychosomatic dermatological syndromes. Occasionally we saw cases who after a period of combat and being wounded developed a psychosomatic dermatological syndrome which was an unconscious defense mechanism against leaving the security of a hospital to return to combat duty. Neuropsychiatric predisposition was a common finding. The large majority of our patients showed frank neurotic traits in childhood or psychogenic skin manifestations for years before military service.

CASE HISTORIES

1	2	3	4	5	6	7
Age	Length of service	Precipitating situational factors in (a) civilian and/or (b) military life	Psychiatric diagnosis	Dermatological diagnosis	Condition and disposition	Comments
CASE 1						
32	2 1/12	(a) Skin symptoms began age 20, shortly after assuming responsibility of supporting family of 3 siblings upon death of father. Extreme marital maladjustment both sexual and temperamental. Divorce after 3 years.	Anxiety state, severe, manifested by tension, feelings of insecurity and inferiority, and psychosexual inadequacy, occurring on routine domestic duty in severely predisposed individual. LD: No, EPTS.	Dermatitis, atopic, chronic, generalized, severe.	Unimproved and discharged from Army.	Severe, long standing psychiatric symptoms made patient unsuitable for military service.
CASE 2						
22	1 9/12	(a) Chronic recurrent eczema since infancy. (b) Signed up for ASTP in psychology but was assigned to engineering. Found mathematics very difficult. Skin lesions worse under tension or stress.	Anxiety state, moderate, manifested by tension, insecurity, neurodermatitis; occurring on routine domestic duty in a severely predisposed individual. LD: No, EPTS.	Dermatitis, atopic, chronic, generalized, severe.	Improved and limited duty.	Has made a very conscientious ward master in a general hospital. Under pressure has recurrences of lesions, still severe but less frequent.
CASE 3						
33	0 7/12	(a) First skin lesions occurred when discovered husband was unfaithful after 10 years of married life. (b) Disliked duty as night nurse; skin eruption appeared a few days after such an assignment.	Anxiety state, moderate, manifested by pruritus and neurodermatitis, tension, headaches; occurring on routine domestic duty in a moderately predisposed individual. LD: Yes.	Dermatitis, atopic, chronic, generalized, moderate.	Improved. Limited duty.	Unsuited for overseas duty, can adjust only in a protected environment where she is accepted.
CASE 4						
26	0 9/12	(a) Onset age 18 when learned his parents had divorced when he was 2 and his apparent father was actually his stepfather. In addition, family moved to another state but patient remained behind with paternal grandmother. (b) No specific situational incidents.	Anxiety state, moderate, manifested by restlessness, insecurity and neurodermatitis, occurring on routine domestic service in a moderately predisposed individual. LD: No, EPTS.	Dermatitis, atopic, chronic, face, moderate.	Improved. Limited duty.	Unsuited for overseas duty. Can adjust only in a protected environment as in case 3.
CASE 5						
20	1 4/12	(a) Chronic, severe skin eruption since infancy. Always sensitive about skin condition and small stature. (b) No precipitating incidents; dislikes "bad language," and lack of privacy in Army.	Anxiety state, severe, manifested by tension, neurodermatitis, marked feelings of inferiority, sexual immaturity and schizoid trends occurring on routine domestic duty in a severely predisposed individual. LD: No, EPTS.	Dermatitis, atopic, chronic, generalized, severe.	Improved. Medical discharge.	Unsuitable for military service; could readily have developed a schizophrenic episode.
CASE 6						
21	1 0/12	(a) Eczema in infancy with no further skin lesions until age 16; at that time was having difficulty with father who wanted patient to become college professor like father. (b) In Army, severe recurrences when ASTP disbanded and was given disagreeable assignment.	Anxiety state, severe, manifested by tension, restlessness, marked feelings of inferiority, and neurodermatitis; occurring on routine domestic duty in a moderately predisposed individual. LD: No, EPTS.	Dermatitis, atopic, generalized, severe.	Improved. Medical discharge.	Given trial of duty as electroencephalograph technician. Did well as long as circumstances did not require him to do ward work, then would have severe recurrences. Unsuitable for military service.

CASE HISTORIES—CONTINUED

1	2	3	4	5	6	7
Age	Length of service	Precipitating situational factors in (a) civilian and/or (b) military life	Psychiatric diagnosis	Dermatological diagnosis	Condition and disposition	Comments

CASE 7

24	2 9/12	(a) None. (b) First skin symptoms appeared 2 weeks after assignment to an air traffic control tower at a training field where traffic accidents were frequent. Patient felt under strain all the time. Since then, has had recurrent episodes under unusual stress such as lightning storms.	Anxiety state, severe, manifested by tension, restlessness, neurodermatitis, and hypertension; occurring on domestic duty in a severely predisposed individual. LD: Yes.	Dermatitis, atopic, generalized, severe.	Improved. Limited duty.	The obsessive-compulsive personality traits of this patient enabled him to make a fairly successful adjustment in the Army until given an unusually responsible position.
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CASE 8

26	2 4/12	(a) None. (b) While overseas was assigned as a base censor. Disliked "snoopiness" of her work, developed skin lesions of neurodermatitis on 3 successive occasions when forced to do censor work which was unpleasant for her.	Anxiety state, with schizoid features manifested by tension, insecurity, restlessness, impulsive behavior; occurring on overseas noncombat duty in a moderately predisposed individual. LD: Yes.	Dermatitis, atopic, generalized.	Improved. Medical discharge.	Acute recurrences of skin lesions whenever ordered to do censor duty which was distasteful to her.
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CASE 9

21	1 4/12	Chronic eczema since infancy. Aggravated by emotional stress or tension. Severe flare up when ASTP terminated and sent to routine military service.	Anxiety state, moderate. LD: No, EPTS.	Dermatitis, atopic, chronic, generalized, severe.	Improved. Limited duty.	Long standing neurodermatitis which was never disabling. A severe flare up in the Army following change in assignment. In ASTP in engineering and adjusted well. When changed to field duty, could not accept routine military duty which to him was uninteresting and far beneath his intellectual level. (IQ-137.)
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CASE 10

21	2 6/12	After 20 months overseas duty as M. P. in combat zone with 4 months of exposure to bombing and strafing was transferred to combat infantry school for training prior to duty in infantry. Disliked change and within 1 week developed an acute, generalized neurodermatitis.	Anxiety state, moderate. LD: Yes.	Dermatitis, atopic, chronic.	Improved. Limited duty.	Clear cut psychosomatic clinical picture.
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CASE 11

19	1 7/12	Eczema since infancy with exacerbations under emotional tension. Under stress of military service and separation from family ties for the first time in life developed more frequent and severe exacerbations of skin lesions.	Anxiety state, moderate. LD: No, EPTS.	Dermatitis, atopic, chronic, generalized.	Improved. Medical discharge.	Clear cut exacerbations with emotional stress. In addition, he had other functional symptoms of hyperhidrosis and frequent flushing.
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CASE HISTORIES—CONTINUED

1	2	3	4	5	6	7
Age	Length of service	Precipitating situational factors in (a) civilian and/or (b) military life	Psychiatric diagnosis	Dermatological diagnosis	Condition and disposition	Comments

CASE 12

38	3 yrs.	b) Assigned as post quartermaster to replace an inefficient officer. Commanding Officer resented him, and there was constant friction between them. Four months later was ordered to field duty in an assignment he disliked. One week later suddenly developed constant profuse sweating of axillae and hands.	Neurosis, situational, moderate. LD: Yes.	Hyperhidrosis, severe.	Improved. Full duty.	Clear cut psychosomatic which responded to psychotherapy including sodium amytal narco-analysis.
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CASE 13

21	Separation from husband who is in the Navy and overseas a year. Friction with mother who was spoiling her child age 8 months. Home situation aggravated further by a rigid domineering stepfather. Sudden onset of generalized pruritus.	Anxiety state, severe.	Pruritus, functional, generalized.	Improved. Able to continue her work as ward attendant.	Clear cut psychosomatic picture which responded fairly well to psychotherapy after failure on local treatment.
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CASE 14

34	1 6/12	After 4 months in combat area with 3 weeks of actual combat, he developed trench foot and was hospitalized. Three days later, developed urticaria which then recurred whenever upset by an ear, nose and throat treatment for sinusitis or was denied a pass or would not get mail from home, etc.	Anxiety hysteria, moderate. LD: Yes.	Urticaria, psychogenic.	Improved. Limited duty.	Clear cut psychosomatic phenomenon which responded fairly well to psychotherapy after only symptomatic relief from routine medications.
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CASE 15

23	2 6/12	Very active military service (11 months combat, wounded twice, has purple heart and cluster, 3 bronze stars and a presidential citation); was then hospitalized for hernia operation; a week later developed urticaria.	Anxiety state, severe. LD: Yes.	Urticaria, psychogenic.	Unimproved. Medical discharge.	Clear cut psychosomatic phenomenon. Urticaria developed in conflict between desire to remain in safety of hospital and feelings of guilt that he had let his outfit down.
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CASE 16

23	5 2/12	After 2½ years of overseas duty was ready to return to the U. S. on rotation. In the meantime, developed resentment against what he felt was unfair treatment of soldiers by civilians and worried about adjustment to life in the U. S. after being away so long. One week before embarkation for U. S. had first attack of urticaria and angioneurotic edema.	Psychoneurosis, mixed type, severe. LD: Yes.	Urticaria and angioneurotic edema on functional basis.	Improved. Sent to N. P. Convalescent Hospital.	Clear cut psychosomatic phenomenon which responded fairly well to psychotherapy after routine medication failed.
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CASE HISTORIES—CONTINUED

1	2	3	4	5	6	7
Age	Length of service	Precipitating situational factors in (a) civilian and/or (b) military life	Psychiatric diagnosis	Dermatological diagnosis	Condition and disposition	Comments

CASE 17

22	1 3/12	One week after ASTP discontinued and patient transferred to routine military duty, he suddenly developed urticaria.	Psychoneurosis, mixed type, moderate. LD: Yes.	Urticaria, psychogenic, moderate.	First improved and sent to limited duty but within 3 weeks relapsed. Medical discharge.	Clear cut psychosomatic picture. Urticaria was provoked experimentally by the psychiatrist by producing emotional stress in the patient by giving him a "bawling out."
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CASE 18

22	1 10/12	Disliked Army; frequent disagreements with non-coms and Commanding Officer. Application for Officer Candidate School turned down; organization moved to P. O. E. and 3 days before finally alerted for overseas shipment, he developed urticaria suddenly.	Psychoneurosis, situational, severe. LD: Yes.	Urticaria, psychogenic.	Unimproved. Medical discharge.	Clear cut psychosomatic phenomenon. No response to medication; no response to psychotherapy because of paranoid personality traits and certain other psychoneurotic characteristics.
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CASE 19

38	3 yrs.	Total overseas duty 18 months first as ward attendant in numbered general hospital in India. Actual duties ultimately became that of inspection details which he disliked. Developed urticaria and angioneurotic edema with some severe recurrences each about 10 weeks apart; each attack would subside after a few days hospitalization.	Anxiety state, mild. LD: Yes.	Urticaria, psychogenic.	Improved. Sent to N. P. Convalescent Hospital.	Clear cut psychosomatic phenomenon. One attack after return to U. S., practically at the port of debarkation and apparently due to excitement of being home. No attacks since then.
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CASE 20

20	1 yr.	Onset of urticaria in a Hawaiian-Japanese; a few months after induction; became severe and eventually disabling while on combat duty in Italy. Some improvement in this hospital at first. Flared up again because of anti-Japanese feeling in civilian communities in this area.	Anxiety state, moderate. LD: Yes.	Urticaria, psychogenic.	Transferred to Hawaii for medical discharge.	A psychosomatic phenomenon which occurred under stress of intensive combat experience. Later flared up in U. S. when patient was upset by anti-Japanese sentiment in this area.
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CASE 21

30	1 yr.	One month after reporting for duty at this hospital she developed urticaria and angioneurotic edema. Had been distressed by anti-Japanese sentiment in this area and possibility of she or other Chinese being mistaken for Japanese.	Anxiety state, mild. LD: Yes.	Urticaria, psychogenic.	Unimproved. Transferred to another installation before disposition was completed.	A psychosomatic phenomenon which appeared to be situational. While under observation as an outpatient, she received orders to a new post in an area where anti-Japanese sentiment was not present. It was felt therefore that a change in physical classification for duty was not warranted at this time.
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CASE HISTORIES—CONTINUED

1	2	3	4	5	6	7
Age	Length of service	Precipitating situational factors in (a) civilian and/or (b) military life	Psychiatric diagnosis	Dermatological diagnosis	Condition and disposition	Comments

CASE 22

36	2 9/12	Developed pruritus ani a few weeks after induction and it has persisted.	Psychoneurosis, mixed type, anxiety state with obsessive-compulsive features, moderate. LD: No, EPTS.	Pruritus ani, functional.	Improved. Limited duty.	Clear cut psychosomatic phenomenon occurring in a rigid personality who found Army life very difficult because of his personality traits.
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CASE 23

38	Civilian life showed mild anxiety and moderate obsessive-compulsive personality traits. Well adjusted in Army until assigned as post exchange officer in a large camp. Had heavy responsibility, long hours, and in charge of a large number of personnel. Within a few months became tense, irritable, and frequently angry or hurt by clashes with personnel. Then developed psychosomatic symptoms of generalized pruritus, band-like headaches, tight feeling in epigastrium, and episodes of anorexia. Finally skin manifestations appeared.	Anxiety state, with obsessive compulsive features manifested by tension, irritability, anorexia, generalized pruritus and neurodermatitis, acute, severe, unimproved; occurring under moderate stress of domestic duty in an obsessive compulsive personality with moderate predisposition, severe impairment. LD: Yes.	Dermatitis, atopic, chronic, generalized, severe.	Unimproved. Retired.	Clear cut psychosomatic picture in which skin manifestations develop after the appearance of the other psychosomatic symptoms.
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CASE 24

25	3 6/12	In civilian life had asthma from age 6 to 17 at which time left home to go to college; this was an opportunity to get away from parental overprotection as only child. For 5 years has noticed under emotional stress would get burning and itching sensations in eyebrows, neck, antecubital areas of arms, and ankles which would go on to dermatitis if tension would continue any length of time. Overseas 16 months, resented authority and being unable to express his emotional reactions.	Anxiety state, manifested by tension, irritability, skin lesions of neurodermatitis, chronic, improved; occurring under moderate stress of domestic and overseas duty in a rigid, egocentric individual of severe predisposition, moderate impairment. LD: Yes.	Dermatitis, atopic, chronic, generalized, severe.	Improved. Permanent limited duty in continental limits of U. S.	A long standing psychosomatic pattern with definite flare ups under emotional stress.
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CASE 25

30	1 2/12	No frank psychosomatic symptoms in civil life. Considerable repressed resentment against officers and authority. Six months ago after being overseas 4 months developed tension, irritability, disinterest in his work, and hyperhidrosis. These gradually increased in severity until marked in character.	Anxiety state, severe, chronic, manifested by hyperhidrosis, tension, restlessness, instability and other psychosomatic symptoms, unimproved; occurring under moderate stress of 10 months overseas non-combat duty in an egocentric narcissistic, insecure individual of moderate predisposition and marked impairment. LD: Yes.	Hyperhidrosis, hands bilateral, severe.	Unimproved. Medical discharge.	Clear cut psychosomatic picture. Patient had a considerable amount of aggression which he was barely able to keep under control; had moderate episodes of emotional instability, temper outbursts and expressions of impatience.
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CASE HISTORIES—CONTINUED

1	2	3	4	5	6	7
Age	Length of service	Precipitating situational factors in (a) civilian and/or (b) military life	Psychiatric diagnosis	Dermatological diagnosis	Condition and disposition	Comments
CASE 26						
23	2 5/12	Twenty-one months overseas in England. With AAF for about 3 months before onset of skin symptoms on 1 Feb. 45. Had been unhappy, "fed up with my job; all it needed was a strong back and a weak mind." In addition, he heard rumors that his outfit was to go to the Southwest Pacific.	Anxiety state, mild, occurring on overseas duty in combat in a fairly stable individual; mild predisposition; moderate impairment. LD: Yes.	Dermatitis, atopic, chronic, generalized, severe.	Limited duty.	Clear cut psychosomatic clinical picture.

KEY TO ABBREVIATIONS

LD = Line of duty.
EPTS = Existed prior to service.

CONCLUSIONS

1. Psychosomatic dermatological syndromes (neurodermatitis, psychogenic urticaria, pruritus and hyperhidrosis) should be excluded from induction just as much as chronic asthma, peptic ulcer, functional hypertension, and chronic psychoneurosis whether expressed purely in psychological symptoms or as other psychosomatic syndromes.

2. Psychosomatic dermatological syndromes are produced or aggravated by the environmental stress of military service.

3. Predisposition is a common and important characteristic.

4. In predisposed individuals faced with situations which are frustrating, potentially threatening or distasteful, an initial attack or new attack or aggravation of a psychosomatic dermatological syndrome can be expected. Specific examples of such situations are rebellion against authority, distasteful duty assignment, and return to combat.

5. Prognosis is poor as far as continued military service is concerned, even on limited duty. These patients react like chronic asthmatics, having recurrent disabling attacks under even minimal environmental stress.

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WHY 2,276 AMERICAN SOLDIERS IN THE MEDITERRANEAN THEATER OF OPERATION WERE ABSENT WITHOUT LEAVE, DESERTED, OR MISBEHAVED BEFORE THE ENEMY

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INTRODUCTION

Upon assignment to the MTOUSA Disciplinary Training Center, the largest overseas installation for general prisoners in the United States Army, an opportunity was provided to the writers to carry on varied and extensive studies of the general prisoner. More than 5000 general prisoners were ex-

desertion and misbehavior, and a large percentage of those convicted for AWOL had been combat troops. Much larger percentages of combat troops are represented in these three major military offenses than appear among prisoners who have been convicted of all general court martial offenses.

The prisoners selected for this study included all cases involving these offenses in the psychological clinic files, accumulated over a period of five months. Several hundred prisoners were no longer in the stockade at the time of this study, since they had "earned clemency" and were restored to honorable duty.

TABLE I

THE THREE LEADING MILITARY OFFENSES IN THE MTO

	White, %	Negro, %	Total %
AWOL	35.2	23.6	32.7
Desertion	18.8	.5	14.7
Misbehavior	14.7	3.5	12.2
Totals	68.7	27.6	59.6

TABLE II

COMBAT EXPERIENCES

	Combat		Non-combat	
	White, %	Negro, %	White, %	Negro, %
AWOL	82.3	46.9	17.7	53.1
Desertion	97.0	—	3.0	—
Misbehavior	99.5	99.8	.5	.2
All prisoners in DTC on 22 offenses	74.2	16.5	25.8	83.5
Average combat time (2,123 cases)	White 3.9 mo.		Negro .3 mo.	

amined by the psychological clinic, neutrally called the Personnel Evaluation Department.

An earlier study, analyzing the types of offenses committed by 2705 general prisoners showed that absence without leave, desertion, and misbehavior before the enemy were the three leading military offenses committed.

The present study attempts to analyze the reasons behind the commission of these offenses. Nearly all prisoners convicted of

TABLE III

THE THREE MAJOR OFFENSE GROUPS EXAMINED

	White		Negro		Total	
	No.	%	No.	%	No.	%
AWOL	919	85.2	160	14.8	1079	100.0
Desertion ...	599	98.0	(12)*	2.0	611	100.0
Misbehavior..	397	67.8	189	32.2	586	100.0
Totals ...	1915	84.1	349	15.9	2276	100.0

* Omitted from this study.

METHOD

In the course of a routine several hour psychological-psychiatric examination of each prisoner, a statement freely made by the prisoner giving a résumé of his offense and his reasons for the commission of that offense were recorded verbatim upon the interview-worksheet, the "DTC Evalograph." The statements of 2276 prisoners were analyzed, classified and treated statistically. Thirty-five fairly definite types of reasons emerged which were condensed into five major categories of prisoners' reasons or explanations of the precipitating factors explaining their derelictions. The five categories were: (a) neuropsychiatric (NP), (b) hedonistic (Hed.), (c) physical (Phys.),

(d) military (Mil.), (e) miscellaneous (Misc.).

REASONS GIVEN FOR AWOL

The military crime of AWOL, violation of Article of War 61, is the most frequently committed offense, both by white and negro soldiers. In peace time, AWOL is not too severely punished, especially if it is of short duration. In time of war, it frequently is punished severely. The group of 1079 AWOL prisoners, 919 white prisoners and 160 negro prisoners has the least amount of combat time of the three offense groups studied.

The three most frequent reasons, given by 44% of the white prisoners, were: (a) "I was scared." (b) "I was drunk" (or "I was drinking"). (c) "My nerves gave away." The three most frequent reasons, given by 40% of the negro prisoners, were: (a) "I was drunk" (or "I was drinking"). (b) "I wanted to have a good time." (c) "I was scared." Table IV presents the complete list of reasons given by the prisoners. For the white group, 67% gave one reason, 27% gave two reasons, and 6% gave three reasons. For the negro group, 77% gave one reason, 21% gave two reasons, and 2% gave three reasons.

Table V presents the five major categories of reasons given for AWOL. There are undoubtedly, overlappings of many single reasons into two or more categories. For example, large numbers of soldiers escaped their neurotic conflicts by drinking, yet drinking has not been classified as a neuropsychiatric reason. Similarly, soldiers, who through exaggeration of physical symptoms attempted to justify their offenses had these reasons classified as physical rather than neuropsychiatric; and soldiers who projected their inadequacies upon their officers or "non-coms" attempting to resolve their insecurities and tensions, had their claims to "non-com" trouble classified in the military rather than the neuropsychiatric category. It is only for the purpose of practical classification that this categorization is presented.

Statistical treatment of the differences existing between the percentages for the white and negro prisoners reveals several significant statistical differences. Since the

white soldier, as a group, was subjected to greater periods of combat stress than was the negro soldier, as a group, it could be assumed, *a priori*, that the white soldier would reveal more psychiatric complaints. This appears to be so. The standard error of the difference between the two percentages was found to be 6.6, indicating a significantly greater degree of recognition of psychiatric conditions on the part of the white prisoner than was shown by the negro prisoner.

Another significant standard error of the difference between two percentages, 3.1, was found for military reasons. This may indicate that the negro prisoner tends to project his inadequacies or deficiencies upon the Army to a markedly greater extent than does the white prisoner. Empirical observations indicate that deep and strong currents of resentment exist on the part of the negro prisoner toward the Army.

The standard error of the difference between two percentages for hedonistic reasons, 1.2, indicates a slightly stronger trend upon the part of the negro prisoner to go AWOL for purposes of seeking pleasure than exists in the white prisoner.

REASONS GIVEN FOR DESERTION

The military crime of desertion, violation of Article of War 58, is one of the most serious a soldier can commit. One charged with desertion faces a General Court Martial and if found guilty will receive a lengthy sentence. A group of 611 deserters, 599 white and 12 negro, were examined. The negro cases were eliminated from this study. In the white group, 97% had been combat soldiers.

The three most common reasons, given by 55% of the group, were: (a) "My nerves gave way." (b) "I was scared." (c) "I couldn't take the shelling." The largest percentage of reasons given is clearly of a neuropsychiatric nature. Approximately 50% gave one reason, 33% gave two, and 7% gave three reasons.

Neuropsychiatric factors play an exceedingly important rôle in the prisoners attempt to analyze, rationalize or present their reasons for their desertions. It is interesting

TABLE IV
ANALYSIS OF REASONS GIVEN FOR AWOL, DESERTION, AND MISBEHAVIOR BEFORE THE ENEMY

No.	Cat.	Reason	Totals of three major offenses										AWOL						Desertion			Misbehavior					
			Total		White		Negro		Total		White		Negro		Total		White		Total		White		Total				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
*RO	%	RO	%	RO	%	RO	%	RO	%	RO	%	RO	%	RO	%	RO	%	RO	%	RO	%	RO	%				
1	19.2	1	10.5	1	15.0	1	6	5.8	2	13.9	1	15.7	3	8.6	2	20.5	1	27.5	1	26.0	1	31.3					
2	17.0	2	18.4	2	5.8	8	4.4	3	3	18.8	3	13.4	13	1.9	1	23.8	2	20.4	2	21.0	2	15.7					
3	9.6	3	18.6	4	4.4	2	14.0	7	4	18.6	4	7.1	1	18.6	3	11.3	3	13.1	3	15.3	3	3.6					
4	9.2	4	5.3	2	5.3	7	3.1	6	1	19.6	6	4.9	4	5.7	4	6.0	5	3.2	5	3.2	5	4.8					
5	5.8	5	4.0	3	6.8	3	9.2	5	6	5.8	5	4.4	5	5.7	6	4.3	7	5.2	5	5.4	9	3.0					
6	4.8	6	4.0	5	9.2	3	4.0	5	8	4.6	7	6.6	2	12.4	10	2.3	13	5.9	4	5.4	3	9.6					
7	4.5	7	3.8	8	3.8	12	2.4	15	2	7.4	5	6.6	3	1.4	5	5.5	6	4.5	6	4.4	6	4.8					
8	3.7	8	2.5	4	8.8	4	4.4	9	15	2.8	8	3.7	7	5.0	12	2.2	19	2.1	5	7	4.8						
9	3.1	9	2.5	9	2.5	9	4.4	10	10	3.7	9	3.6	9	4.3	11	2.2	12	1.4	16	9	7	4.8					
10	2.7	10	2.1	11	2.1	18	1.4	16	4	1.9	16	2.1	17	1.0	9	2.7	10	2.2	9	2.2	11	2.4					
11	2.3	11	2.3	11	2.3	18	1.4	14	9	1.9	10	2.9	10	3.3	13	1.9	17	1.0	14	1.1	.....	.....			
12	2.2	12	2.2	11	2.4	11	2.4	11	2.9	10	2.9	10	2.9	10	3.3	13	1.9	17	1.0	14	1.1				
13	2.1	13	2.2	20	7	17	1.6	18	17	1.6	18	1.8	22	5	8	2.9	11	1.9	10	1.0	13	1.2					
14	2.0	14	1.8	10	4.4	10	4.4	10	10	2.9	11	2.6	6	5.7	17	1.3	18	1.8	18	1.8	17	1.2					
15	1.8	16	1.8	16	1.4	14	1.4	14	14	2.3	14	2.4	14	1.9	14	1.8	20	1.6	10	1.6	.....	.....			
16	1.6	17	1.6	15	2.0	13	2.5	13	13	2.5	13	2.5	12	2.4	20	1.8	16	1.0	17	1.9	14	1.2					
17	1.6	15	1.8	.....	.....	.....	.....	.....	19	1.1	19	1.2	.....	.....	15	1.5	8	3.1	7	3.5	.....	.....			
18	1.5	18	1.4	14	2.0	12	2.7	12	12	2.7	12	2.6	11	2.9	21	1.6	26	1.1	25	1.1	.....	.....			
19	1.3	19	1.4	.....	.....	.....	.....	.....	18	1.6	17	1.8	.....	.....	16	1.4	22	1.4	20	1.5	.....	.....			
20	1.2	20	1.9	25	7	20	1.1	20	20	1.1	20	1.1	18	1.0	22	1.5	15	1.0	15	1.1	.....	.....			
21	1.0	21	1.8	26	3	22	1.5	22	22	1.5	22	1.6	24	1.3	18	1.2	12	1.1	12	1.3	.....	.....			
22	1.0	22	2.2	7	1.0	21	1.6	21	21	1.6	21	1.6	23	1.5	19	1.1	21	1.6	23	1.3	12	2.4					
23	1.0	23	1.3	13	2.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	1.0	24	1.3	4	2.1	.....	.....	.....	23	1.5	19	1.0	23	1.3	23	1.3	25	2.3	27	1.4	.....	.....			
25	1.0	25	1.3	22	1.7	22	1.7	22	23	1.5	23	1.5	19	1.0	23	1.3	25	2.3	27	1.4	.....	.....			
26	1.0	26	1.7	17	1.4	20	1.5	25	25	1.5	24	1.2	.....	.....	24	1.2	25	2.3	27	1.4	.....	.....			
27	1.0	27	1.2	28	1.7	24	1.5	24	33	1.0	25	1.2	.....	.....	25	1.2	27	1.2	.....	.....	.....	.....	
28	1.0	28	1.2	29	1.7	24	1.5	24	33	1.0	25	1.2	.....	.....	25	1.2	27	1.2	.....	.....	.....	.....	
29	1.0	29	1.2	26	1.7	33	1.0	24	33	1.0	25	1.2	.....	.....	25	1.2	27	1.2	.....	.....	.....	.....	
30	1.0	30	1.3	23	1.7	27	1.3	27	28	1.3	27	1.3	21	1.0	27	1.1	23	1.3	24	1.3	.....	.....			
31	1.0	31	1.3	23	1.7	27	1.3	27	28	1.3	27	1.3	21	1.0	27	1.1	23	1.3	24	1.3	.....	.....			
32	1.0	32	1.3	23	1.7	27	1.3	27	28	1.3	27	1.3	21	1.0	27	1.1	23	1.3	24	1.3	.....	.....			
33	1.0	33	1.3	23	1.7	27	1.3	27	31	1.0	29	1.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	1.0	34	1.3	23	1.7	27	1.3	27	32	1.0	29	1.1	26	1.0	29	1.1	26	1.0	29	1.1	.....	.....			
35	1.0	35	1.3	23	1.7	27	1.3	27	32	1.0	29	1.1	26	1.0	29	1.1	26	1.0	29	1.1	.....	.....			
Total			99.97	99.72	99.50	99.89	99.9	99.5	99.8	99.9	100.4	99.8	99.8				

* RO — Rank order.

to note that a remarkably small percentage of reasons given are attached to the military setting. One accustomed to hearing soldiers "bitch" about the Army would assume that the military services were grossly mismanaged and under moronic leadership. Still, only *one* deserter out of 599 complained of inadequate training; only *one* complained of insufficient food; only *one* complained of mistreatment; and all together only 5.3% blamed the Army for their desertions.

TABLE V

FIVE MAJOR CATEGORIES OF REASONS FOR AWOL

	White.		Negro.		σ_{p1-p2}	D/σ_{Tp}
	%	σ_{p1}	%	σ_{p2}		
1. Neuro-psychiatric ..	47.9	1.6	23.5	3.3	3.7	6.6
2. Hedonistic	28.5	4.7	35.8	3.8	6.0	1.2
3. Military	9.9	3.1	24.0	3.4	4.6	3.1
4. Physical	9.3	3.0	11.9	2.5	3.9	.7
5. Miscellaneous ..	4.2	2.0	4.8	2.2	2.9	.2

TABLE VI

FIVE MAJOR CATEGORIES OF REASONS FOR DESERTION

	White, %	σ_{p1} , %
1. Neuropsychiatric	71.8	3.2
2. Physical	10.3	3.9
3. Hedonistic	9.3	3.7
4. Military	5.3	2.9
5. Miscellaneous	3.3	2.3

REASONS GIVEN FOR MISBEHAVIOR BEFORE THE ENEMY

Misbehavior before the enemy, violation of Article of War 75, is an extremely serious military crime, heavily punished by a general court martial. It is committed in nearly all cases by combat soldiers. This study included 586 cases, 397 white and 189 negro prisoners. Approximately 63% of the white group gave one reason, 30% gave two, and 7% gave three. In the negro group 70% gave one reason, 27% gave two, and 3% gave three.

The three leading reasons, given by 62% of the white prisoners, were: (a) "I was

scared." (b) "My nerves gave way." (c) "I couldn't take the shelling." The three chief reasons, given by 57% of the negro prisoners, were: (a) "I was scared." (b) "My nerves gave way." (c) "I was sick." The five major categories were as shown in Table VII.

Neuropsychiatric reasons clearly predominate in the prisoners' attempts to recognize or evaluate their reasons for their misbehavior. Despite the fact that both white and negro groups are nearly all combat soldiers, there is a statistically significant standard error of the difference between two percentages of 3.0, indicating that white prisoners have considerably more psychiatric com-

TABLE VII

FIVE MAJOR CATEGORIES OF REASONS FOR MISBEHAVIOR BEFORE THE ENEMY

	White		Negro.		σ_{p1-p2}	D/σ_{Tp}
	%	σ_{p1}	%	σ_{p2}		
1. Neuro-psychiatric ..	79.3	2.0	67.4	3.4	4.0	3.0
2. Physical	10.8	4.9	15.6	2.6	5.5	.5
3. Hedonistic	5.5	3.6	5.0	5.4	6.5	.1
4. Military	2.9	2.7	3.6	4.3	5.4	.1
5. Miscellaneous ..	1.2	1.7	7.2	1.9	1.9	3.1

plaints that negro prisoners. This may be interpreted in many ways. It may mean that the white soldier is under greater tensions in the combat zones thus developing more anxieties and feelings of insecurity, than does the negro soldier; or it may mean that the white soldier, if all conditions were equal, is more prone to psychiatric disturbances than is the negro soldier. It is possible that the white prisoner is more aware of the social acceptance of psychiatric complaints than is the negro prisoner, and thereby emphasizes these complaints to a greater degree than does the negro prisoner.

Another significant difference, 3.1, appears for miscellaneous reasons. The negro prisoner offers considerably more miscellaneous reasons to explain his misbehavior than does the white prisoner.

TABLE VIII

RECAPITULATION OF THE FIVE CATEGORIES OF REASONS

	NP		Hed.		Phys.		Mil.		Misc.	
	White, %	Negro, %	White, %	Negro, %	White, %	Negro, %	White, %	Negro, %	White, %	Negro, %
AWOL	47.9	23.5	28.5	35.8	9.3	11.9	9.9	24.0	4.2	4.8
Desertion	71.8	—	9.3	—	10.3	—	5.3	—	3.3	—
Misbehavior	79.3	67.4	5.5	6.0	10.8	15.6	2.9	3.6	1.2	7.2

SUMMARY

Analyses were made of the reasons given by 2276 general prisoners for their commission of the three most frequently committed military offenses: AWOL, desertion, and misbehavior before the enemy. Large percentages of the AWOL groups and nearly all of the desertion and misbehavior cases had been combat troops. White and negro prisoner groups were compared.

Thirty-five types of reasons given by the prisoners, were condensed into five major

categories: neuropsychiatric, hedonistic, physical, military, and miscellaneous.

Table IV presents the reasons given in rank order and by percentage, for the three offenses examined.

Statistical treatment revealed that significant differences existed between the white and negro groups explaining AWOLs on neuropsychiatric and military reasons. Significant differences also were found in the misbehavior group for neuropsychiatric and miscellaneous reasons.

Neuropsychiatric factors predominate in the prisoners' explanations of their offenses.

RESIDUALS OF COMBAT INDUCED ANXIETY¹

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It is inevitable that demobilization will release from military service a number of veterans still experiencing residuals of combat induced anxiety. Veterans clinics, civilian psychiatrists and physicians generally are seeing these men now. Some may need prolonged care; many, possessing a more stable personality structure, will need little more than an opportunity for insight and psychological re-orientation in peacetime and civilian pursuits. In the neuropsychiatric section of a general hospital serving a large metropolitan area we have had an opportunity to observe and treat a number of patients near to separation from the service who we believe present problems common in veterans clinics today. Some were admitted from pass or furlough because of acute emotional disturbances while others were referred from the medical and surgical services within the hospital. A significant number of these patients gave no history of neurotic determinants before they were overwhelmed by excessive and harrowing combat experience. A greater number dated the onset of symptoms to days or months following evacuation from the battle zone although their disorder was similar, though less intense, to that usually designated as "combat exhaustion" in the forward areas. It is this group of relatively stable, mature and well adjusted individuals whom we have designated as suffering from residual anxiety reactions for the purpose of emphasizing their specific therapeutic needs and good prognosis as contrasted to the more classical types of psychoneurosis.

In general, the residual anxiety reaction showed many similarities to the usual types of neurotic illness but they differed, as Goldstein(1) pointed out, in that no fixation of symptoms or fundamental personality change had taken place at this hospital level. They seemed no more established than "combat exhaustion" which the commission of civilian psychiatrists(2), reviewing the psychiatric

policy in the European theater, reported did not correspond to any recognized or established psychiatric syndrome. The differences were apparent in a comparative study of 36 residual anxiety states and an equal number of individuals presenting symptoms of psychoneuroses whose histories were indicative of neurotic adjustment in the past.

ONSET OF SYMPTOMS

Table I shows the time of onset in the two groups. All of the residual anxiety group had experienced combat of varying severity and duration. The established psychoneurotic group had been overseas but only 20

TABLE I

Onset of symptoms	Psychoneurosis	Residual anxiety state
Before military service.....	2	0
Since day of induction.....	2	0
In overseas base (no combat)....	13	0
In combat	12	10
While prisoner of war (German)..	2	3
In evacuation or U. S. hospitals..	2	10
On ship enroute to U. S.....	1	1
Upon return to U. S.....	2	7
On furlough from overseas.....	0	5
	36	36

had had actual battle experience. Their exposure to battle conditions had been much less severe and prolonged for they showed an approximate average of 36 days in combat compared to 78 $\frac{9}{10}$ for the former.

Study of individual cases revealed many different factors responsible for the final psychoneurotic disablement in those predisposed. Thirteen developed symptoms while stationed in non-combatant bases—3 while in isolated outposts in the Aleutians and one in Labrador. Symptoms of equal severity had been present before or since the day of induction in 4 individuals. One patient claimed that his symptoms had not developed until he entered the hospital for a second wound which appeared to be self inflicted; another developed multiple complaints while recovering from an injury incurred in the

¹ From Gardiner General Hospital, Chicago, Illinois.

rear echelons of supply. A marked increase in tremulousness while aboard ship returning to the United States was noticed by a medical aid man. One medical officer and a tail gunner, who had been a prisoner of war after bailing out over Germany, developed acute depressive reactions after returning home and learning of the infidelity of their wives. The 12 patients whose symptoms were precipitated by combat differed from the residual anxiety group in the character and fixity of their complaints. Four of them obviously exaggerated disability resulting from wounds or injuries. One dental officer became extremely depressed after three busy months in a battalion aid station. One soldier ran to the rear as soon as he was placed under artillery fire; an officer cowered in his fox hole and was totally useless as leader of troops from the outset of battle; one developed an hysterical amnesia and a multiplicity of persistent gastrointestinal complaints; and a schizoid gunner developed many paranoid ideas before he was relieved of duty because of a flak wound.

The 10 patients in the residual anxiety group who developed symptoms in combat did so only after prolonged and harrowing experiences. Severe stuttering occurred in one patient after a prolonged advance through the hedgerows of France. He recovered after five days in a rest camp only to break again when next exposed to the sound of artillery fire. An enlisted man who had been through four major battles and a total of one hundred days of combat in the Pacific did not develop symptoms until he was subjected to bombing of the hospital where he was confined because of a severe arm wound. One patient was blown out of his plane and fell 14,000 feet before he could open his damaged parachute; another could not continue after losing three planes to enemy fire in five days. An officer in a holding position subject to nightly Japanese infiltration attacks and daylight bombing raids developed symptoms which persisted after he was returned to the United States on rotation. A lieutenant who had served successfully throughout the African and Sicilian campaigns broke down after he had led five attacks into Cassino in three days. A near burst of an artillery shell caused un-

consciousness and bleeding from his ears and, when he tried to carry on, he was unable to control his weeping and tremulousness. Latent symptoms developing in 23 patients after removal from battle zones were similar to those developed in combat. Six of this group were accompanied to the hospital by frightened relatives who had witnessed a terrifying nightmare or had become concerned about the patient's behavior.

SYMPTOM ANALYSIS

It is difficult to show clearly the differences observed in the psychiatric examina-

TABLE 2

Symptoms	Psycho-neurosis	Residual anxiety state
Tenseness	24	36
Tremulousness	7	19
Battle dreams	1	16
Startle reactions	2	15
Sleeplessness	2	14
Disturbed by noise and confusion; poor adjustment to civilians.....	2	14
Restlessness	4	12
Irritability	2	11
Somatic symptoms	19	11
cardiac	3	6
gastrointestinal	14	3
respiratory	0	1
urinary	2	1
Headaches	10	10
Dizziness	6	0
Tinnitus	0	6
Depression	13	7
Morbid fears, doubts, compulsions.	11	0
Hysterical conversion symptoms...	7	1

tion of the two groups although here the tense, hesitant, somewhat defensive individual who is suffering residual anxiety is most unlike the established psychoneurotic. Patients were encouraged to list their complaints with as little guidance from the therapist as possible. The psychoneurotic usually gave a good account of his symptoms with little prompting while patients in the residual anxiety group were more reluctant to speak of their experiences and frequently showed embarrassment during the initial interview.

The leading symptoms in the two groups were summarized for comparison in Table 2. Tenseness and other symptoms typical

in "combat exhaustion" were more prominent in the residual anxiety states while phobic reactions, hysterical conversion symptoms, somatic complaints and depression were more often encountered in the psychoneuroses. Somatic complaints were common in both groups but there was little evidence of fixation of anxiety in the former. Headache was as frequent in one group as the other although only 2 of the psychoneurotics had a definite history of exposure to blast as compared with 23 in the anxiety group. The blast was of sufficient force to produce unconsciousness in 5 and tinnitus was present in 6. A sense of "dizziness" was not mentioned in any of this number although it occurred 6 times in the psychoneurotic group.

Little is known concerning the rôle of blast concussion in the development of "combat exhaustion." Most men who have seen the amount of combat encountered in our group must have been exposed to some blast. In at least 4 patients blast concussion may have been partially responsible for their removal from combat although 3 had other wounds. In several, removed because of combat exhaustion, exposure to near burst of artillery shells seemed to serve as the final precipitating blow in their breakdown.

TREATMENT

The good response to brief psychotherapeutic procedures and an activity program designed to permit a gradual strengthening of the patient's sense of personal security through contact with civilian life first led us to distinguish the residual anxiety states from the more fixed psychoneurotic reactions. Treatment was conducted on an individual basis. The patient was encouraged to relate his symptoms and an attempt was made to reconstruct associated events on a conscious level. When this could not be accomplished easily hypnosis techniques were employed. In our experience hypnosis accomplished the same results obtained with sodium amytal or pentothal sodium interviews. We are in agreement with Hart and his associates(3) who believe these drugs merely facilitate hypnotic therapy. The same violent reactions on recollection of traumatic scenes of battle, often with marked expression of guilt, were obtained with all methods.

The intensity of the response seemed directly related to the horror of the combat experiences. All patients reported subjective relief from tension after undergoing one of the "abreactive" sessions. It was necessary to repeat the procedure in some although continued improvement was most dependent upon additional psychotherapy. The material gained in various interviews was reconstructed in consciousness and was gradually related to past and current experiences as treatment progressed. In addition to participation in the recreational and occupational therapy program within the hospital, patients were urged to take advantage of free pass privileges in order to increase their contact with civilian activities. Thus, attitudes toward friends and relatives, hopes and ambitions for the future as well as attitudes toward symptoms and military experience became the basis for further explanation and reassurance. Dependent attitudes were discouraged. The fact that symptoms often subsided after admission to the hospital from furlough or pass stimulated discussions of dependency upon a known military régime in more than one case.

The mode of onset and duration of symptoms had little effect upon accessibility for treatment. We have seen one case in which nightmares developing after the last war were relieved twenty years later. A heightened suggestibility was apparent in some cases. This may lead to apprehension concerning the significance of symptoms if not actual displacement of anxiety. At least one case in this series first became fearful of heart disease after a medical officer casually asked him if he knew he had heart trouble. The fact that he had been able to withstand the rigorous physical demands of prolonged combat was overlooked by both the patient and his doctor. There does appear to be a real possibility that free anxiety noted in this group of patients may become translated into functional disturbances.

The neurotic fixation of anxiety apparent in the psychoneurotic group followed patterns established before combat experience. Treatment of phobias, conversion mechanisms and somatizations remaining after the acute reactions induced by battle situations had subsided was not very satisfactory at

this hospital level. In the residual anxiety group whom we have segregated, treatment usually resulted in the establishment of a healthy orientation and return to a level of stability with little evidence of neurotic displacement or fixation. This difference points toward the specific traumatic experiences of war as the significant etiologic factor in the development of symptoms in this group.

DISCUSSION

Much has been written concerning the dynamics of the "war neuroses" since the evacuation of Dunkirk and the bombing of London. Brief, direct methods of treatment have afforded an opportunity to explore and relieve the acute reactions. Two generalizations have come out of this approach which appear particularly applicable to this group whose residual anxieties we believe to be a specific product of their war experiences; namely, anxiety is the basic problem in the war neuroses, and, even the most stable individual will show "neurotic" breakdown if subjected to stress beyond his individual level of tolerance. This breakdown appears to be a final mastery by more instinctual patterns in the struggle against the idealism and group loyalties which have controlled behavior as a respected member of a combat team. The acquisition through military training and discipline of ego-strengthening devices which prepare the individual for the combat situation has been discussed by Grinker(4) and others who speak of "combat exhaustion" as resulting from a final disintegration of the weakened ego in the face of overwhelming anxiety.

Several different factors seem to be responsible for the continuation of symptoms or their latent development. Identified as a member of a group the soldier exerts strong suppressive forces to hold anxiety in check. These are no longer so necessary when he finds himself removed through wounds or other illness to a hospital in the rear. The outlet for aggression which has been focused upon a common enemy is no longer available to him and he finds behavior acceptable and unnoticed in the battle zone in conflict with what is expected of him now. Gillespie(5) in commenting on the latent period mentioned the rôle of suggestion either from

within or without in the development of symptoms. He noted that so long as individuals were kept busy they were less likely to develop symptoms but that given an opportunity, rumination over events experienced rather than perceived often led to additional meanings. One of our patients expressed this when he said that his symptoms did not develop until he arrived in a hospital in Paris and began thinking of his narrow escapes. Guilt feelings often expressed as a sense of failure in responsibility to the group and depressive reactions growing out of reflection over participation in some noxious act of aggression were seen as an elaboration of this mechanism.

Some symptoms we have observed are best explained as conditioned responses. The seasoned soldier soon learns the meaning of sounds and responds to them automatically. The startle response often persisted after many other symptoms had been relieved. The slight scraping of a chair behind him caused one of our patients to suddenly freeze. He had been engaged in sabotage behind enemy lines and had become adept at evading the enemy. Lightning, the back-fire of an automobile exhaust and other unexpected noises often caused sudden increase in muscular tension, palpitation and visceral sensations which as quickly disappeared when the situation was perceived. Generally such reactions became less bothersome with relief from tension, lapse of time and reorientation.

Most soldiers show an increase in anxiety on return home—some admit apprehension. Most of them have a fanciful concept of the home to which they have yearned to return, still, after the first joyous reunion, their own strangeness becomes apparent to them. The realities of the challenge in future adjustment where they must assume responsibility for themselves and others when they have had little time to recover from the isolation of functioning near to primitive levels serve as a further source of tension which may bring to the fore the residual unresolved anxieties induced by combat. Undoubtedly the majority of returning veterans will find security in old civilian patterns with a minimum of emotional disturbance. How many will encounter insurmountable frustrations leading to dependent neurotic attitudes in

the future must still remain a matter of conjecture.

RÉSUMÉ

1. Thirty-six patients whose past histories were relatively free of neurotic determinants but who exhibited residual symptoms of combat induced anxiety similar to that usually designated as "combat exhaustion" were compared with a similar number of individuals who developed symptoms more typical of established psychoneurotic reactions while overseas.

2. An analysis of the onset of symptoms revealed breakdown in combat after extreme experiences in 10 of the residual anxiety group while 23 developed symptoms of a similar character weeks or months after removal from the battle situation for other reasons. Symptom analysis showed little fixation of anxiety as compared with the psychoneurotic group whose symptoms followed established patterns.

3. Treatment was designed to permit relief from anxiety through ventilation and

reconstruction of traumatic experiences on a conscious level. Hypnosis and pentothal sodium or sodium amytal hypno-analysis were employed. Continued explanation and reassurance with a gradual reorientation in peacetime and civilian relationships usually resulted in lasting relief from symptoms and return to a former level of stability.

4. There does appear to be a combat induced anxiety state which is a specific product of the stresses of war.

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ON ORIENTAL STOICISM

COMMANDER JAMES CLARK MOLONEY (M. C.), U. S. N. R.¹

I

The Asiatic is different. It's true he maintains a traditional tranquillity in the face of those jagged circumstances that torment the Occidental. One day on a slightly used road of the Motobu, a peninsula that juts into the China Sea, I encountered a group of migrating natives. Homeless, dispossessed, they sought new anchorage. Without lamentation most of them managed a smile as they jogged through the drizzle and mud. At Jinuza the native doctor cut deep incisions into the leg of a civilian boy, but recently struck by the treacherous *habu*. The boy winced a little. At Yagachi a leper lost her leg. There was the anesthesia from the disease, and the anesthesia from the spinal injection, but there was no nepenthe for the loss of her own tissue, nor for the handicap to her locomotion. She calmly accepted the situation. At Taira a twenty-five calibre Japanese bullet was sliced from the back of an eight-year-old boy. He never flinched. At Ishikawa a husband met his wife after the war had separated them for five months. Neither had known the fate of the other. Yet, on this their first meeting, there was no demonstration. They continued talking as if they had parted according to plan the previous hour. At Fukuyama a woman in full consciousness permitted a breast abscess to be laid wide open. She grimaced, but not a sound passed her lips. At Soke, at Fukuyama, and at Jinuza hundreds of the youngest school children unprotestingly allowed Lieutenant Commander Harold Fink (M. C.), U. S. N. R. to obtain blood through finger punctures. At best, they manifested but mild interest in the procedure. At Jinuza the native Okinawans did not resent the dentist. At Ishikawa hundreds of school children uncomplainingly sat beneath the foot driven drill. It was routine for them. They accepted it as a matter of course.²

¹ From The Haven Sanitarium, Rochester, Mich.

² Personal communication from Lieutenant Commander Harlan Crank (M.C.), U.S.N.R.

These observations were not the exceptions. From Hentona to Koza, from dispensaries and hospitals came similar accounts of Oriental impassivity.

On Okinawa psychosomatic disease was seldom encountered. Hyperthyroidism was not observed. Shock reactions were rare. Autonomic crises were infrequent. I never saw an Okinawan faint. I recall but two classical cases of psychoneurosis and two less classical cases of bronchial asthma. A negligible percentage of Okinawan mothers ceased lactating as a result of the traumatic impact of war. I personally saw no case of diabetes mellitus and but one uncertain case of malignancy. Neurogenic dermatoses and varicose veins were non-existent. Osteoarthritis was seldom demonstrable in the younger person. Beaded radials and arcus senilis were rare.

Lieutenant Commander Harlan Crank (M. C.), U. S. N. R. saw three asthmatics and two diabetics among the 11,000 civilians admitted to the Ishikawa dispensary. The same series of cases included 12 peptic ulcer patients. Parenthetically, Crank observed that the Okinawa ulcer patient demonstrated the demanding and dominating exterior of the American ulcer patient. The Crank series also featured one woman who suffered from malignant arterial hypertension. Belonging to the upper crust, she had been neurotic for years.³

Necropsy did not reveal those structural changes, germane to prolonged psychosomatic tension. Lieutenant Commander Harold Fink (M. C.), U. S. N. R. performed 150 autopsies at the Military Government Hospital G6-59-(3) established for civilian service at Jinuza. These examinations did not disclose evidence of peptic ulcer nor the emphysematous changes identified with persistent asthma. An infrequent number of postmortems revealed arteriosclerotic disease. The pathological process immediately evocative of hyperthyroidism was not en-

³ Personal communication from Lieutenant Commander Harlan Crank (M.C.), U.S.N.R.

countered. Neurogenic dermatoses were practically absent.⁴

Again, at the U. S. Naval Hospital G6-54, situated north of Nakaoshi, Lieutenant (jg) Edwin Edwards (M. C.), U. S. N. R. conducted 53 autopsies. Edwards discovered one cretin but no evidence of the pathological changes of hyperthyroidism. Peptic ulcer, asthmatic emphysema and neurotrophic dermatoses were not encountered. Edwards discovered one case of arteriosclerosis. In none of his autopsies was the degenerative process associated with diabetes demonstrable.

Further, Lieutenant Commander Wagner (M. C.), U. S. N. R., senior medical officer present at the Naval Military Government Hospital G-6-51 stationed at Koza, presented me with the reports from two series of autopsies conducted at his establishment. The first series including 201 cases was performed by Lieutenant Commander E. L. Benjamin (M. C.), U. S. N. R. between the dates of April 19 and June 12, 1945.⁵ The Benjamin studies did not mention any case of asthmatic emphysema, thyroid pathology, diabetes or osteoarthritis. He discovered 22 cases of arteriosclerosis, but the sclerotic process was severe in only two instances. He unearthed 9 cases of peptic ulcer. Benjamin found three cases of malignancy, one malignancy being a carcinoma of the breast.

The second autopsy series made available by Lieutenant Commander Wagner (M. C.), U. S. N. R. was completed by Lieutenant Paul E. Steiner (M. C.), U. S. N. R. at the Koza hospital between June 13 and July 30, 1945. This series included 150 cases. Steiner discovered 7 cases of arteriosclerosis. In no instance, however, was the arteriosclerotic process severe or fatal. The Steiner series made no mention of diabetes mellitus, neurotrophic dermatitis nor asthmatic emphysema. He unearthed 4 cases of peptic ulcer. At the same time he suspected that the high incidence of ulcer discovered by Benjamin was due to the psychosomatic impact of war. It is important to know that, during the Benjamin epoch particularly and even dur-

ing the Steiner régime the Koza hospital was situated not far behind the front lines. All the Okinawans treated at this institution had been subjected to prolonged and relentless bombardments from planes, Japanese and American artillery and from the huge and numerous rifles of the American Fleet. It was dangerous for the natives to forage for food and most of the civilians evidenced a rather advanced phase of emaciation when hospitalized. Among the dead Steiner found two cases of thyroid adenomata but he did not state whether the adenomata were associated with toxic degeneration. His series included one case of malignancy, a sarcomatous like lesion of the stomach.⁶

Upon completion of his autopsies Steiner, independently and without knowledge of my pursuits, wrote an astonishingly provocative and illuminating summary:

... it may be stated that these natives show some striking anatomical and pathologic differences from Occidentals. Noteworthy are the relative absence of the retrogressive and degenerative changes (except for osteoporosis), including arteriosclerosis and its numerous manifestations in heart, brain, kidneys, pancreas, etc., neoplasms, hypertension, osteoarthritis, cholelithiasis, and biliary tract disease, the various nephritides.

In my opinion the factors responsible for these differences merit further study in the future, especially because two of these diseases—cancer and arteriosclerosis—will be our number one and number two disease problems after the war in America.

I do not know what Steiner⁷ had in mind when he penned this remarkable summary. He recorded the facts. Save for his comments on the peptic ulcers in the Benjamin series, he kept his etiologic conjectures to himself. If not intended by Steiner, then I will assume full responsibility for the prediction that any culture evidencing a dearth of psychosomatic disorder will evidence also a dearth of malignancy. I too have succumbed to the hypothesis that much that is malignant, belongs to the category of psychosomatic disease.

⁶ Most of the civilian admissions mentioned in part one of this article had been either wounded or starved by war. A smaller number of the admissions had been for the organic and tropical diseases peculiar to the region. The admissions represented all age groups.

⁷ Undoubtedly Steiner will elaborate upon these findings in his future contribution to the literature.

⁴ Fink will report a complete review of his findings.

⁵ Undoubtedly Dr. Benjamin will give the subject more complete treatment in the literature.

In support of Steiner's plea that the problem be subjected to a more thorough investigation, I suggest that a group of well trained clinicians, surgeons, pediatricians, obstetricians, pathologists and psychiatrists be returned to the Orient for the purpose of completing this project.

II

Guam provided a contrast. Some 1400 miles east and south of Okinawa, a young Chamorro boy stood crying before the dispensary doctor. An agitated father tried to restrain his wildly flailing arms. The lump on the son's hand had to be opened. The doctor made the incision. The blood flowed, and the father fainted.

Lieutenant Commander Harold Jacobziner (M. C.), U. S. N. R., averred that this was not unusual for Guam. The Chamorros often fainted. He found them facile candidates for hysteria, fainting spells, autonomic crises and neurotrophic dermatoses. Asthma was so prevalent among them that Jacobziner contemplated making an Island survey for foreign protein. Lieutenant Commander Koffelt (M. C.), U. S. N. R., internist at Guam's Military Government Hospital 203, had encountered numerous cases of functional cardiac disorders, and many cases of hyperthyroidism. A few of the Chamorro nurses at the Military Government Hospital suffered from Basedow's disease. Lieutenant Commander Monrad Aaberg (M. C.), U. S. N. R. obstetrician and gynecologist had observed many cases of malignant arterial hypertension and pre-eclamptic disorders among the native women. I gained the impression that he believed himself to be dealing with psychosomatic disorders. Despite the number of cases of Guamanian cardiovascular disease, I have been told by Koffelt and Jacobziner that an insignificant number of arteriosclerotic processes were unearthed at autopsy by Lieutenant Commander Harry Zimmerman (M. C.), U. S. N. R. peace time professor at Yale.

At the Child Health Clinic at Agana and again at a similar clinic at Barrigedos,⁸ I

was afforded an opportunity to confirm the observations of Jacobziner. At both places, I found that the children young and old reacted violently to clinical procedures. The older children winced and squirmed when inoculated, or when their fingers were pricked. When subjected to a painless physical examination, abject terror spread over the faces of the younger children. They screamed raucously.

On these visits, I saw many cases of tachycardia. Often the frightened child urinated where he stood. It was customary for the Chamorro mother to stifle the screaming by forcibly clamping the child's mouth shut. On more than one occasion, an exasperated mother subjected her enraged child to a vigorous slap. Bedlam reigned.

As I watched these women choke back the screams of their children, it became apparent that they were afraid of something, were afraid of outside forces, were afraid of public criticism. On Guam public opinion rears the children "via the medium of the mother." Jacobziner attributed the Chamorro neuroticism to maternal overprotection. "Smothering" would be a more fitting term.

In contrast my mind flashed back to a scene that typified the Okinawan attitude toward the child. There had been a festival at Okuba. The Okinawans threaded the foot paths of their little villages. One little miss made her way alone between the cycads and morning glories that grew on the ridge. She could not have been more than four years of age. Her gleaming gold and red kimono rustled in the sun. The brocaded *obi* flashed with fire. This perky Okinawan miss ensconced in a background of green foliage and violet morning glories, made a perfect subject for kodachrome photography. Through Yamamoto, the Nesei interpreter, I tried to persuade her to pose for me. She would have none of it. Because the Nesei have trouble with the more archaic language of Okinawa, I called some adult natives to intercede for me. Without pressure, influence, threats or bribes, they simply asked the little girl if she wished to have her picture taken. She said no. The adults laughed and moved on. They averred there was nothing they could do about it. The little

⁸ Dr. Jacobziner is entitled to much credit for his establishment of the Guamanian child health centers. He overcame obstacles that would have stumped a less courageous and less resourceful man.

miss had a right to make up her own mind. As she wended her solitary way over the crest of the ridge, I felt a glow of respect for this child who made her own decisions.

The Chamorro strain seems heavily salted with mongoloid genes. The almond eyes of the Asiatic predominate among the Guamanian natives. But yet, on Guam the much vaunted Oriental stoicism is conspicuously absent. I make a point of this because the question of an ethnic or constitutional threshold to pain is certain to be raised. Despite the Mongolian elements of ancestry, the Chamorros are Christians. Most of the families have Spanish names, the Christian motif being carried out by such prefixes as Jesus or Maria.

For some ethnic groups, for some reason or other, the Christian religion becomes confluent with or subjectively extends neurosis. The projections, the masochism, the identifications with the agonies of Christ, Mary and the mutilated martyrs and saints have a tendency to erase ego boundaries, and many individuals seem to become unable to distinguish between themselves and Christ, or between themselves and the "little son" being "mutilated" by surgery.⁹

In some cultural situations, the whole thing becomes so mixed up that the individual becomes inseparable from the structuralizations of the religion. I imagine that such loss of identity could be educed by adult tyranny. Tyranny usually forces subordinates into submissiveness and children into being seen and not heard. This robs the child of his birthright. At times, such intransigence subsumes a forced and conventional reverence to an awesome all-powerful God, who is also called father.

III

It is fortunate that the Chamorro contrast was available for this study. Should stoicism prove to be a constitutional quality of the Mongolian, then one would expect to find the Chamorros less hysterical than any of the other non-Asiatic ingredients that constitute their ethnic mixture. At least one would be prone to imagine that the constitutional contribution of the Latin would be dampened, diluted or subjugated by

Oriental influences.¹⁰ In factual contradiction to this, Jacobziner found the Chamorros more neurotic than any of the racial groups seen by him in any of New York's clinics for children.

I am reasonably enough acquainted with Mendelianism to know that this constitutional assumption need not apply. Nor is it important. For I have satisfied myself that the so-called Oriental stoicism is a derivative of acculturation. At Jizuza, Okuba, Ishikawa, Fukuyama, Kochea, Kushi, Soke, Sedaki, at Taira, at Nakaoshi, at Hentona and at other military government establishments throughout the Island of Okinawa, I have seen new-born native babies behave exactly like new-born American babies. If removed from the breast, they cry and strike out lustily. To convince myself, I have often removed the comfortably nursing child from the mother's breast. To this maneuver, the child at first reacts with a "startle response." This is followed by the tossing of his arms and feet. With congested face, he swells up, arches his back and cries. Replaced at the breast, the crying blends into sobs that soon cease. The violent muscular behavior rapidly subsides.

The Okinawa baby resists minor surgery. Screaming, the baby squirms, swells, twists and tries to push aside the surgeon's knife. These tests and observations, made under varying conditions, were repeated at the dispensaries operated by the native doctors Oshiro and Iraiya, at the different clinics conducted by Lieutenant Commander Harry Horowitz (M. C.), U. S. N. E., at the clinics of Lieutenant Commander Robert Culvert (M. C.), U. S. N. R., at the dispensary of Lieutenant (jg) Manwaring (M. C.), U. S. N. R., and at the two psychiatric hospitals supervised by myself.

To be sure, at birth the Okinawan baby is no stoic. For days, weeks and even months after delivery he behaves exactly like the American, and like the Chamorro child. The so called "Oriental stoicism" develops later.¹¹ To animal experimenters, to men who make

¹⁰ Spanish blood is said to figure prominently in the Chamorro aggregate.

¹¹ For discussion of the probable factors involved in this development see: Moloney, James Clark: "Psychiatric observations on Okinawa." Psychiatry, November 1945.

⁹ The converse may be more correct.

rats, sheep and cats neurotic, this would come as no surprise.

CONCLUSION

The unruffled mien of the Asiatic is legendary. When not attributed to constitutional factors, it is traditional for the Occidental to believe that the Oriental, deliberately blocks the natural egress of emotional energy. It is generally supposed that the flatness of affect is achieved through a studied and energetic suppression of feeling. Oriental unresponsiveness has been likened to the active stoicism of the Spartan youth, who unwincingly permitted a fox to eat out his entrails. Calmness under such circumstances demands the utmost in energy suppression.

But energy is indestructible. Its normal egress blocked, it canalizes physiological pathways neither designed nor adapted to its use. The surge and impact charge strange tissues with severe and unexpected stresses. In time these stresses induce demonstrable structural changes. This dynamism embraces the most fundamental evocative of psychosomatic disease. Since the Okinawa Oriental is free from psychosomatic disease, one is forced to the conclusion that the Okinawan neither consciously suppresses nor unconsciously represses his emotional intent. Incredible as it may seem, he just doesn't react to situations which customarily disturb the Occidental. The Oriental is different.

THE PSYCHOLOGIST'S CONTRIBUTION TO THE PSYCHIATRIC HOSPITAL¹

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The psychologist as well as everyone else who works in a psychiatric hospital and expects to make a contribution to such a hospital should be aware of two basic facts.

The first one is that a psychiatric hospital exists to help patients with psychiatric disorders achieve good mental health. Regardless of what other contributions a hospital makes in related fields, such as research and teaching, its primary function remains the treatment of sick people.

The second equally important point is that the primary responsibility for treating patients belongs to the psychiatrist. He is the one most suited by training, experience and interest to best achieve this goal. In order to do this successfully he needs all the help he can get from the auxiliary services of the hospital, but the actual treatment of sick people is the job of a physician.

Yes, it is true that there have been a few—a very few—psychologists who have not quite realized this. The suspicion aroused by these few has done a great deal to interfere with the development of a proper relationship between psychiatrists and psychologists. However, we cannot help feeling that this particular point has very often been overemphasized. It has been our experience that once the psychologist and the psychiatrist clearly understand what each has to offer they can work together beautifully. Certainly, we can say that when this mutual cooperation does not exist it is the patient who suffers, for he does not receive the benefit of all the services available which can contribute to his getting well.

May we at this time enumerate the four main areas in which a psychologist can make his main contribution? They are: clinical testing, research, training, and vocational, educational, and avocational guidance. We should like to discuss each one of these briefly.

Clinical testing is the one field that everyone feels that he understands rather well. All you have to do is to call in a psychologist. He does a psychometric and he tells you what the I. Q. of the patient is. And it is easy to see why people think that way since the original contribution of the clinical psychologist was in the field of psychometrics. However, in the last few years psychology has advanced a great deal, especially in the field of qualitative testing where we are concerned with not only how much mental capacity the patient has, but with the patient's psychological structure. Tests like the Rorschach and the Minnesota Multiphasic when properly used give the physician valuable insight into the dynamics of the patient's personality.

It should be emphasized, however, that there are no specific tests that are good for every situation. If the psychiatrist will tell the psychologist what he wants to find out, the psychologist can then decide which out of his battery of many tests are best suited to achieve this. This decision requires good clinical judgment on the part of the psychologist. It cannot be done by a mere novice. Then, too, this testing should be carried out at the very earliest possible time, when the psychiatrist is formulating his understanding of the patient. Frequently, as the case develops, further tests are indicated and the psychologist should then be called in again to see what he can offer. In order to do this the physician and psychologist must work together very closely. Both of them must approach each other with mutual confidence and understanding. Although there should be formal reports of the findings of these objective tests, the contacts should not be limited only to these, for in his informal interpretation and discussion the psychologist can get a better idea of the psychiatrist's problems and at the same time can give the latter a better understanding and analysis of his findings. It is, of course,

¹ From the New York Hospital-Westchester Division, White Plains, New York.

true that the use of psychological tests beyond their original psychometric function is a relatively new development in psychology, but it is a contribution that is a very real one and our knowledge in this field is expanding greatly.

Although these tests offer an objective approach to emotional problems, let us have no illusions about anybody being able to use these tests mechanically. Just like any other laboratory findings a skilled interpretation demands a skilled interpreter. A too mechanical approach to these procedures has resulted in a great deal of difficulty, and yet it is just what we should expect when these tests are used by unskilled workers. Even in the field of psychometrics, which are perhaps as objective as any of our available tests, we very often find serious errors due to this type of approach. May we give as an example a recent patient at this hospital?

This patient had been tested since early childhood and the psychometric findings had numerically indicated that he was mentally deficient. All through his youth and adolescence he was treated as a mental deficient and was sent to schools especially prepared to handle such problems. Frequently throughout this period he was tested and the original findings were confirmed. When he arrived at this hospital at the age of about 24, we tested him and found that while it was true that his I. Q., insofar as score was concerned, indicated mental retardation, yet, he at no time had been mentally deficient. In fact, he probably originally had a high level of intelligence. His low score, even in early childhood, was due to the fact that some disease process was interfering with his proper functioning, in this case probably early schizophrenia, for at this time, here, he showed clearly that he had this disease.

Now how did we know from our tests that he has not been mentally retarded and was in fact probably suffering from schizophrenia? We found this out by an analysis of the eleven subtests which compose the Wechsler-Bellevue Intelligence Scale. On the block design sub-test, which is an excellent measure by itself of non-verbal intelligence, he showed a response that we expect in people of average intelligence. His per-

formance on general information, similarities (logical character of his thinking process), and on picture completion is average, while his vocabulary is above average—all this in spite of the fact that he was at that time mentally ill. No mentally retarded person could show these abilities at the levels indicated by these tests. Nor could he have acquired these abilities as he grew older. Experience has shown that if he did not have them as a child he would not have them as an adult. He did fall down in his comprehension test (which measures practical judgment in concrete situations), digit symbol tests (which measure keenness of perception and sensorimotor speed, arithmetical reasoning and digit span (both of which, among other things, measure the ability to concentrate)). So that although the total score, which is 78, might by itself indicate a deficient intelligence, the analysis of components which make up this total score showed that he can do certain things well which a mentally deficient person could not do. He showed losses in practical judgment in concrete situations and ability to concentrate, which we would expect to find in a schizophrenic patient. We must caution at this point that on the basis of just these facts alone, we would certainly hesitate to make a specific diagnosis; however, this information in conjunction with other material available, both from the clinical findings of the psychiatrist and other tests, confirmed the diagnostic inference of schizophrenia. This is an example of a so-called intelligence test that when analyzed not only gives the mental level at the time, but gives us some qualitative information. This boy who really needed psychiatric attention early in life was thrown in with a group of mentally deficient and his basic problems, which demanded treatment, were ignored.

The second area we mentioned, that of research, is one in which the psychologist can be of particular value. It should be remembered that during his graduate work much stress has been placed upon research. In order for him to get his doctor of philosophy degree, he must present a fairly adequate thesis representing some original work. All through his training objective methodology has been constantly emphasized. In

addition, he is particularly well suited to working in the psychiatric field because his orientation is such that he has an understanding of functional disorders and at the same time is trained in applying objective techniques to them. Many people in the research field find it very hard to understand diseases that show no demonstrable pathology. They are too accustomed to dealing with things they can specifically measure so that when they begin to work in the field of psychological disturbances, they are quite at a loss; in fact, many of them show an active resistance and antagonism to working with psychiatrists. A psychologist has, by virtue of his training, a better understanding of the problems faced by the psychiatrist; in fact, he often faces different aspects of the same problems. We feel that the psychologist can very well be one of the centers of research in psychiatric hospitals. He should, of course, be very careful when carrying out his research to remember the basic function of the hospital, namely, that of treating patients and getting them well, and he should be equally aware of the dangers of disturbing a patient so that much of the therapeutic work done by the psychiatrist is not disrupted.

But these are things he can readily understand and appreciate. Here, again, close cooperation between the two can achieve a great deal. Both of them have so much to contribute: the psychologist, his objective methodologies; the psychiatrist, his great understanding of the clinical problems he constantly faces. Collaborating with psychiatrists can help the psychologist avoid some of the errors that men make when they become involved in problems outside of their own specific training.

Just one word of caution! May we emphasize at this time that above all we must never give the patient the feeling that he is being used as an experimental guinea pig. It is always easier to tell him that we are giving him a test rather than to tell him that he is the subject of an experiment. Very few people can accept this latter. We must emphasize, too, that whenever one is using a patient for any such test or study the doctor treating that patient should be consulted and fully advised as to what is being done. No

patient should be worked with unless his physician fully approves. This facilitates the work of the experimenter and at the same time avoids the possibility of creating an emotional upset in the patient.

A new approach being used at the New York Hospital, Westchester Division, is giving those patients that need it vocational, avocational and educational guidance. We all know that what the patient does after he leaves the hospital is extremely important to ensure that the good achieved by the hospital is not lost. Vocational guidance is very valuable for the well person because doing the type of work that is best suited to one's personality and abilities is helpful in maintaining a happy, well-balanced individual. It is even more important for people who have emotional problems to be placed in the right type of work. In addition, we commonly see people who, due to changes in their family situation, such as children growing up and lessened responsibilities, suddenly find that they have very little to do themselves. They may not have an economic problem that makes vocational guidance as such economically important, but they certainly do have an avocational problem. The development of hobbies so that spare time can be properly utilized, especially when spare time means practically the entire day, is an essential function to which the psychologist can make a sound contribution. This problem develops a bit when we realize that many women are not accustomed to doing things alone and like activities in which their husbands can join them. In that case, we may find that we should call the husband in and give him some avocational guidance. That, in fact, is what we have begun to do and have found that it is being well received.

Then there is the problem for the younger people of determining what type of educational program they need. Here, again, we must take into account their illness, and here the psychologist—as always in the mental hospital—works very closely with the treating physician in working out the educational and ultimately the vocational future of the patient.

This field of vocational, avocational and educational guidance has been greatly neg-

lected in psychiatric hospitals, and it is one that we at the New York Hospital feel is quite important. Incidentally, we should add that the patients themselves are very receptive to it and we have found them cooperative and grateful for any help we can give them. It certainly makes them feel better prepared to face the outside world after a period of hospitalization.

Here, again, the psychologist can bring to bear objective techniques in the measurement of aptitudes, interests, learning ability, educational achievement, etc., that are very valuable. However, these test techniques are only a part of the story. The psychologist must have a good understanding of vocations. He must have a thorough-going knowledge of our educational system and what the different schools have to offer. Above all, he must have good common sense so that he can properly integrate these various fields of knowledge and come out with a coherent and practical program. A library of vocational and educational information is essential in order to carry out this job properly. In addition, special testing equipment is necessary which ordinarily is not available in a psychiatric hospital.

May we emphasize that special training is required to carry out this work properly; the fact that one is a psychologist does not necessarily mean that he has this special training.

The fourth function is the training function. In order for the psychiatrist and the various other members of the staff to properly utilize the psychologist's findings, they should have an understanding of what these tests are and what they can and cannot do. This type of information cannot be picked up casually. It requires a definite program of training which should be carried out by the psychology department. This can be done by a series of lectures and demonstrations.

Incidentally, this instruction should not be limited to the physicians, but can very well be extended to include the nurses, the social workers and other personnel who are expected to handle the patient on a professional level.

In addition, the psychology department should always be training new psychologists by carrying on an active intern program. These interns can be very useful to the hospi-

tal in that they can do some of the routine work of the department and at the same time they can be trained so that they can go out into the field and make their contribution with real practical knowledge, not only academic theory.

Obviously, just any psychologist cannot carry out the type of program outlined above. It requires a well-trained and capable person. To attract this type of personnel the hospital must compete with the universities, with industry and with public agencies. Up to now they have done this unsuccessfully, and for the most part the well-trained psychologist has not come to the mental hospital. Why? For one reason, the salary level has, generally speaking, been totally inadequate. It has attracted people who have come with a minimum of graduate training. Then, too, in most hospitals a psychologist has done merely a routine job.

If the hospital is going to attract the right type of personnel, they must pay well and they must give the psychologist proper status in the hospital. Since he works in so many areas and serves the hospital as a whole, it is my opinion that the psychologist should work directly under the medical director or his representative. The medical director in his position of responsibility has the over-all view of the hospital's needs and he, better than any other member of the staff, is qualified to set the policy of such a department.

One other point that should be brought out at this time is: how large should the staff of the psychology department be? Well, for a hospital of about 300 patients, a chief psychologist, an assistant psychologist and two interns can very well, in my opinion, carry the load. With such a staff it would be possible to test every patient coming into the hospital, in addition to performing the other duties we have mentioned.

In conclusion, let us say that as we see it the psychologist is there to help the physician, who is treating the patient, more successfully to treat that patient. The psychologist performs a service. This he can do best when working in close liaison with the physician. It must be an atmosphere of mutual cooperation, confidence and respect. That, coupled with an understanding of each other's problems, we think is the answer.

PHYSICAL SIGNS IN SCHIZOPHRENIA

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The purpose of this paper is to discuss some of the physical signs frequently seen in schizophrenia, and to call attention to the rather constant sign which is seldom, if ever, mentioned in the literature, but which, in our opinion, is of diagnostic value in distinguishing the catatonic type. This type is, of course, of common occurrence, but is not always readily diagnosed in the early stages.

The physical characteristics of schizophrenia in general may be classified as developmental, endocrine, autonomic, metabolic, and those which arise from disturbances in the central nervous system. The following rather comprehensive list of physical signs occurring in schizophrenia has been gathered from a number of sources. Some of them are apparently of little importance, and occur rather infrequently, while others are seen commonly, and are helpful in diagnosis. None is always present:

- A. Developmental
 - 1. Asthenic or asthenic-athletic habitus.
 - 2. Cardiac and circulatory aplasia.
- B. Endocrine
 - 1. Abnormal distribution of hair.
 - 2. Abnormalities in size and consistency of testes.
 - 3. Abnormalities in texture of hair and nails.
 - 4. Changes in the thyroid gland.
- C. Autonomic
 - 1. Sympathicotonic
 - a. Vasomotor:
 - (1) Spasm of radial arteries.
 - (2) Cyanosis of hands and feet.
 - (3) Hypothermia of hands and feet.
 - (4) Dermographia.
 - (5) Edemas.
 - b. Excessive sweating, segmental:
 - (1) Hands and feet (probably sympathetic).
 - (2) Axillae (? sympathetic).
 - c. Gastro-intestinal upsets and constipation.
 - b. Increased salivation.
 - 2. Vagotonic
 - a. Pupillary disturbances; dilation, contraction, irregularity, sluggish reactions.
- D. Metabolic
 - 1. Low B. M. R.
 - 2. Low blood pressure.

E. Central Nervous System Disturbances (possibly)

- 1. Exaggerated tendon reflexes.
 - 2. Convulsive states.
 - 3. Disturbances of cutaneous sensibility (decreased).
 - 4. Respiratory irregularities.
 - 5. Headache.
 - 6. Fever.
 - 7. Fibrillation of eyelids (catatonic stupor).
- F. Miscellaneous
- 1. Association with tuberculosis.
 - 2. Ease of fatigue.
 - 3. Insomnia.

While all four types of schizophrenia have certain mental similarities, it is well known that there are certain special characteristics which set the catatonic type apart from the simple, hebephrenic and paranoid types. In a similar way the physical signs are nearly always seen in catatonic schizophrenia rather than in the other types. This is particularly true of the signs indicating autonomic imbalance. Cases of catatonic schizophrenia practically always show some of the above mentioned signs. In addition, we have noticed that while nearly all of our cases of catatonic schizophrenia are of the asthenic body type, the simple, hebephrenic and paranoid types are frequently of the athletic, pyknic or dysplastic body type.

We have been particularly interested in the vasomotor sympathicotonic group of signs which are seen in the extremities, namely hypothermia, excessive sweating and cyanosis of the hands and feet, and the sign to which we wish to call especial attention: spasm of the radial arteries. This sign, of which we were able to find no mention in the literature, is very common in catatonic schizophrenia, being present in almost every instance in our series. It is also common in anxiety states of the schizoid type, but is seldom seen in the other types of schizophrenia and probably rarely in other types of mental disturbance.

Spasm of the radial arteries as observed by us closely resembles that described in Raynaud's Disease, and is apparently due to the same mechanism, *i.e.*, hyperstimulation

of the sympathetic ganglia which send vasomotor fibres to the region. The artery is definitely palpable in the usual place at the wrist, and feels like a thick-walled elastic rubber tube. It can frequently be rolled under the finger. In an older person this might be confused with arteriosclerosis, but since it is of significance chiefly in people under 35 years of age, this gives little difficulty. In addition, the spastic artery is not tortuous nor does it have any irregularities such as are caused by calcium plaques.

Such radial spasm is usually associated with the other signs of vasomotor spasm in the extremities, that is hypothermia, excessive localized sweating and cyanosis. It is, however, much more constantly present. The hands may be of good color and become warm at times especially if the patient is in a warm room, but the radial spasm seldom changes under such circumstances. After a period of hospitalization, as the mental symptoms begin to regress (as they so often do in catatonic schizophrenia), there is usually a concomitant gradual relaxation of the radial arteries, and if the patient makes a recovery from his mental condition, the arteries may become quite soft.

The value of this sign in the diagnosis of early mental disease is not difficult to see. A young person in a somewhat irrational, excited mental state frequently presents a problem for diagnosis. Although a description of the history of the patient's former personality is usually helpful, at times it is not at all conclusive. In such cases, if the patient is of an asthenic or athletic habitus, and has spasm of the radial arteries, with or without cold, moist, cyanotic hands and feet, there is considerable probability that it is a case of schizophrenia, and usually of the catatonic type.

Two case summaries follow, one a typical schizophrenia of catatonic type, and the other a rather severe anxiety state of the schizophrenic type.

CASE 1.—R. W., age 21, onset at age 13. Patient rather suddenly became agitated, excited and confused; refused to eat for a time. He was hospitalized in various places and his condition varied considerably. After four years he seemed quite improved, but a year later again became worse. When first seen by us the patient seemed to be quite deteriorated. He was partially irrational, rather

apathetic, and at times laughed and shouted for no particular reason. His reactions were very childish. Examination was difficult because of the patient's lack of cooperation, but revealed the following: Patient was of asthenic body type, there was definite spasm of the radial arteries, the hands and feet were cold and moist, the finger and toenails were quite cyanotic; there was excessive perspiration in the axillae. Dermographia was present in slight degree. Heart rate was 50, with occasional extrasystole. B. P. was 112/80. The physical and neurological examinations were otherwise negative.

CASE 2.—W. D., age 22, onset about one year before admission. Patient began to worry about his health, heart, digestion, etc., and then became depressed. He is extremely shy in crowds and does not make friends easily. He sleeps poorly. On admission the patient was very apprehensive and afraid he was going to die. He was emotionally very unstable. Physical and neurological examinations revealed an asthenic body type, acne of the chest and back, B. P. 135/80. The radial arteries felt very rubbery, and the hands and feet were moist but not cold at the time of the examination. On another occasion the hands and feet were cold and somewhat cyanosed. There was excessive perspiration in the axillae. The examination was otherwise negative. The patient remained in the hospital about three weeks and then continued as an outpatient. When last heard from about a month after his discharge, he was feeling very well and had apparently recovered. He was diagnosed anxiety state, schizoid type.

The following hypothesis is suggested in the hope that it may lead to further thought and experimentation bearing on the sign of radial spasm.

In schizophrenia there is depression of the autonomic regulating center, and the remission of the disorder is produced by stimulating this center. This is very evident in the disappearance of the vascular spasm with recovery. It is possible that the sympathetic mechanisms resulting in vasospasm in the hands and feet also operate in the vessels of the brain, and this might be instrumental in causing mental changes in schizophrenia. In line with this are rather rare cases of schizophrenia in which thrombosis of the lungs, brain and other organs has been observed. In addition, this hypothesis might explain the partial success seen in the various types of treatment for schizophrenia, such as production of aseptic meningitis, injection of sterile horse serum intraspinally, carbon dioxide and oxygen inhalations, metrazol shock, insulin shock and electroshock.

Of course we realize that many patients are observed in whom there is evidence of marked sympathetic hyperstimulation, resulting in cold, moist, cyanotic extremities (for instance the group of neurocirculatory asthenia patients described by Crile) in whom mental symptoms are limited to feelings of anxiety and mild agitation, and these patients are far from being schizophrenics. However this does not necessarily disprove our hypothesis, although it does make further explanation necessary. Apparently, if our hypothesis is correct, the brain is not always affected in the same degree as other parts of the body. We believe that the above theory is deserving of further thought and research.

SUMMARY

1. Physical signs in schizophrenia are listed and classified according to type.

2. A sign of which no previous mention has been found in the literature is described—spasm of the radial arteries. It is

very frequent in catatonic schizophrenia, and is of some diagnostic value. It is apparently related to the other signs of sympathicotonia seen in the hands and feet, but is more constant.

3. It is suggested that similar vasospasm in the brain might cause organic changes resulting in schizophrenia, and the desirability for further studies along these lines is emphasized.

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CEREBRAL LESION RESULTING IN SPATIAL DISORIENTATION¹

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The great advances and increased interest in psychiatry and neurology in recent years have helped us to differentiate specific elements in the so-called organic syndrome. Such cases always have evidences of organic disease which may be obscured by the accompanying secondary psychiatric reaction.

The following case report is offered as an illustration:

History.—M. H., a 45-year-old female, was admitted to Bellevue Hospital, psychiatric division, December 8, 1945, because of confusion and depression.

The patient's present illness dated back to July 6, 1945, when she was delivered of a dead child (as a result of a placenta previa). She bled profusely prior to delivery, and following delivery her hemoglobin fell to 34%. The patient was given two transfusions and, except for a thrombophlebitis of the right leg, her post-partum course was uneventful. She was discharged from her local hospital July 23, 17 days after delivery. Two weeks later she began to have severe generalized headaches, accompanied by transient momentary flashes of unformed bright lights. Vision was impaired so that, for example, she was able to see a clock, but could not see the numbers or the hands of the clock. Two years previously, while ironing, she experienced a similar episode; she saw flashes of light and vision was impaired. This persisted for only a few minutes and did not recur until the present illness.

When readmitted to her local hospital, her hemoglobin was 54%, NPN 49.5 mgms. percent, and the blood pressure 180/100 (in a week it went to 160/90). There was a heavy deposit of albumin in the urine. The serum albumin was 3.24 grams and globulin was 1.4 grams. According to the patient, for the first three days of that hospital stay, she was totally blind; she was acutely disturbed and restraints were necessary.

An ophthalmologist examined the patient one month after the onset of the visual changes and stated: "There is emptiness of the arteries and accentuation of the reflexes in the fundi. There is enlargement of the physiological cupping. No hemorrhage or exudates. Temporary blindness may be attributed to anemia or chronic nephritis."

When the patient returned home, a month after the onset of the visual changes, she felt that "everything was strange"; she was lost in her own apartment. She did not know which way to turn to get from one room to another; on several occasions her

husband found her in a room that she did not mean to enter. She stumbled into chairs and tables. She had difficulty sitting down in a chair; once she sat down on the floor while aiming to sit in a chair. She has since learned to make certain the chair is behind her before sitting down. She once sat in the bathtub while attempting to sit on the nearby toilet. Her husband noticed that she would sit too far away from the dinner table and that she had difficulty in putting a cigarette into an ash tray.

During all this period the patient was depressed. She felt that she had an incurable disease, that life was hopeless, and she cried easily. Prior to her admission to Bellevue Hospital, she was given five electric shock treatments with no apparent change in her depression or in her visual disturbances. Because of the depression and "confusion" described above, the patient was sent to the psychiatric division with the diagnosis of "parergasic reaction."

Physical Examination.—During her stay in Bellevue Hospital she showed the following: The blood pressure was 140/92. General medical status was otherwise normal.

The pupils were round, regular and equal; they reacted well to light, directly and consensually, and to accommodation. The fundi showed no abnormal changes. Dr. Alfred Kestenbaum, of the visiting ophthalmology staff of Bellevue Hospital, evaluated the visual fields as indicated in Fig. 1. Only central vision and the homonymous right upper quadrants were intact. Optokinetic nystagmus was present in both lateral directions. The remaining cranial nerves were intact.

There was no motor weakness. The knee and ankle jerks were slightly more active on the right. Errors were occasionally made in the perception of numbers written on the feet; there was no difference in comparison of the two sides. The sensory status was otherwise normal for light touch, position and vibration sense and pin-prick. Neurological examination was otherwise normal.

Spatial Orientation.—As indicated above, there was marked impairment of the visual fields. The patient walked cautiously, especially downstairs, and she made use of the intact upper visual fields by gazing downward. She sat down on a chair very cautiously, feeling for the chair behind her before sitting down. This difficulty in sitting down was not due simply to the loss of vision in the lower fields, as evidenced by the following: the patient was made to stand behind a chair and then come around the chair to sit down, looking at the chair until the final move of turning the head forward and sitting down. She was then told to close her eyes and sit down without guiding herself with her hands. When she came around the left side of the chair, she tended to sit on the floor on the right side of the chair; when she came around the

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right side of the chair, she tended to sit on the floor on the left side of the chair. (This same test was tried with several normals. They were able to sit on the chair readily and accurately.)

On one occasion the patient was asked to draw a floor plan of the bed arrangement in her own dormitory room. She had been in this room for a month. She was able to place her own bed and her neighbor's bed accurately, but she was completely unable to locate any of the others, not even the bed of a patient she had frequently attended, and whose bed was directly opposite her own. She knew the patient's name; she could visualize her and describe her, but she had no idea where her bed was.

herself to various objects. She localized well the direction from which a voice came. There was no aphasia or apraxia. The patient is right-handed. Her brother and son are left-handed.

Psychiatric Examination.—At the time of admission the patient was found to be depressed. She cried readily and begged for help. She referred all of her difficulties to her inability to do her housework and confusion. She was well oriented in time, place and person. Recent and remote memory were good. Calculations were performed well. She gave no evidence of delusions or hallucinations. She seemed justifiably depressed because of her disabilities. She assumed that she was insane and would be sent to a state hospital.

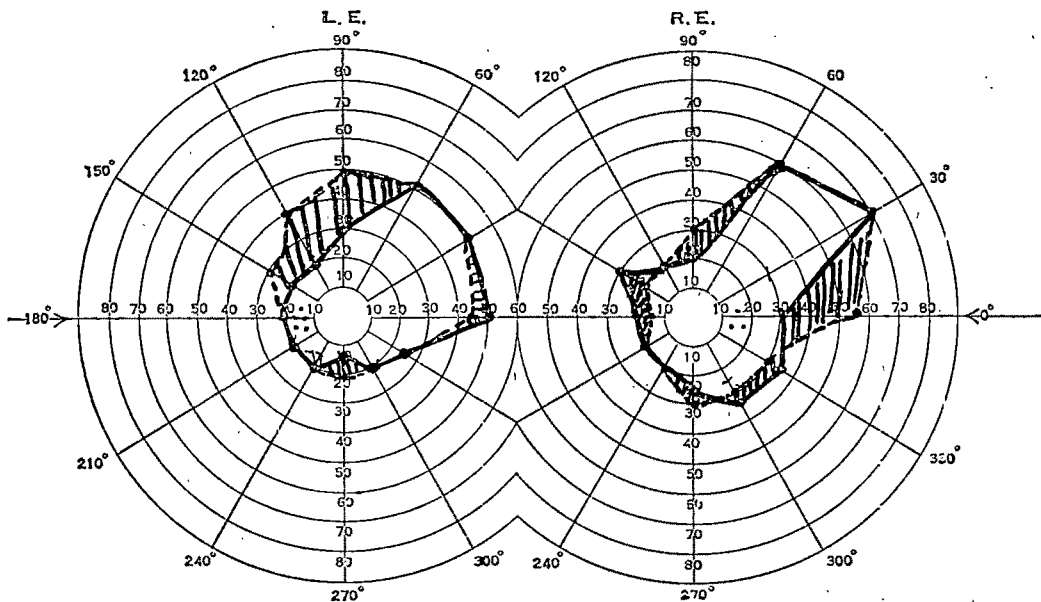


FIG. 1.—Visual fields by confrontation. Only central vision and the homonymous right upper quadrants are intact. The shaded areas indicate the fields on retesting.

She could not say whether the kitchen was on the right or left side of the dining room, although she had eaten approximately 90 meals there.

She could not draw a floor plan of the ward. She had no difficulty in indicating which direction she would have to go to get to various parts of the city. At times, there was a tendency to confuse the right and left side of her body. Aside from this there was no loss of body image. She made many mistakes in rearranging in proper order from memory three objects that were placed in front of her. With the Kohs Blocks, she could do only the simplest designs and she did these with great hesitancy. There were no alexia, agraphia, acalculia or finger agnosia. There was no visual object agnosia or loss of visual imagery. She could visualize and describe accurately people's faces, and objects shown to her for a half minute. She had no difficulty in appreciating the relative distance from

Later, when the nature of her illness was explained to her and assurance given that she was not psychotic, she showed marked clearing of her reactive depression.

Psychometrics.—On the Bellevue-Wechsler adult intelligence test, the patient attained a composite I. Q. of 101. The verbal I. Q. was 113 and the performance I. Q. was 90. Her conceptual reasoning was good as indicated by the high score on the reasoning test. She showed tremendous falling off of functioning in the areas of form perception. Thus, on the block design test she could do only the first and simplest design and could not do any of the others. On the Wechsler memory scale she attained a memory quotient of 92. The impairment was in the area of visual recall. The disparity between the I. Q. and memory quotient was not primarily indicative of a memory loss in the usual sense, but rather was caused by the subject's in-

ability to organize visual patterns. The patient's difficulties with spatial relationships are indicated in Fig. 2.

Laboratory Data.—The hemoglobin was 13.8 grams, the red blood cells 4,620,000 per cu. mm. and the white blood cells 6,400 per cu. mm. with a normal differential count. The urine had 30 white blood cells per high power field and the specific gravity was 1.023. The blood Wassermann test was negative. Antero-posterior and lateral X-ray views of the skull were normal. The initial spinal fluid pressure was 32 mm. of water. Dynamics were normal. The fluid was clear and colorless. There

difficulties indicates that the optic nerves are not involved. The normal optokinetic nystagmus speaks against a lesion of the middle or posterior parts of the optic radiations. Therefore, the lesion must be within the first part of the optic radiations or more probably in the visual cortex (area 17 of Brodmann) involving the upper and lower lips on the right and the upper lip on the left to account for the three quadrant defect,

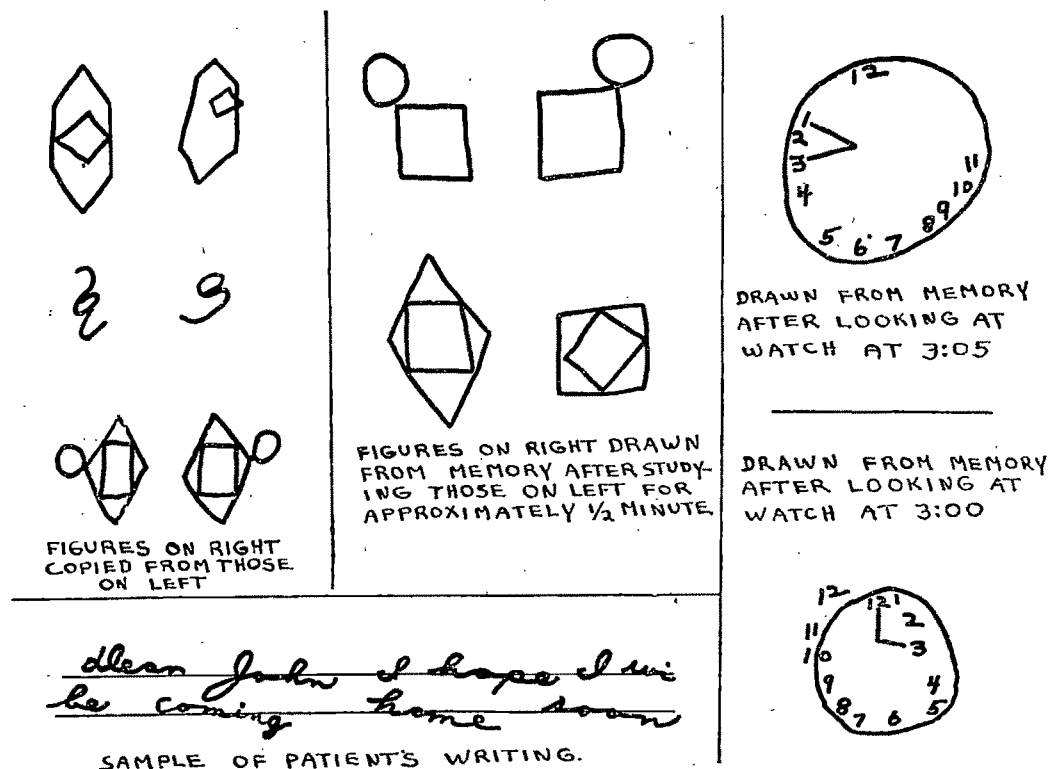


FIG. 2.

were two lymphocytes per cu. mm. The Pandy, Wassermann and colloidal gold reactions were negative.

Electroencephalography showed a slightly abnormally slow record with a focus of diphasic spike seizure discharges and slow waves in the left parieto-occipital region, suggestive of localized brain damage in this area.

Air encephalography was attempted on two occasions and although each time 130 cc. of fluid were removed and 120 cc. of air injected, only an occasional sulcus was visualized. There was no filling of the ventricles.

Comment.—The absence of optic atrophy nine months after the onset of the visual

although a lesion on only the left side along with an extinction phenomenon cannot be absolutely excluded.

The spatial disorientation may be explained by a lesion in the left occipital region (area 19 of Brodmann) or further forward in the parietal area. It is noted that the electroencephalogram showed changes indicative of localized brain damage in the left occipito-parietal area. The lesion was probably an ischemic infarct or hemorrhage consequent upon the severe anemia and hypertension.

The patient's difficulty with spatial orienta-

tion and right and left orientation accounted for her confusion which was very likely the result of a focal cerebral lesion. Such a patient with visual spatial agnosia, if not carefully examined, might easily be mislabelled as having confusion of a more general nature occurring with diffuse brain involvement.

It would seem that because of the organic defect, one should not have subjected the patient to electric shock therapy. The depression was a reaction to a distressing physical disability and the depression decreased when the exact nature of the illness was made known to the patient.

CONDITIONED RESPONSE TO FELLATIO

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Clifford Allen describes sexual oralism as "The obtaining of sexual pleasure from the application of the mouth to the sexual organ. It is a common perversion in both heterosexual and homosexual. Whether the female does the act to the male or the male to another male, the act is known as fellatio." This paper is primarily concerned with sexual oralism in males. An attempt will be made to define the identifying features in the homosexual personality structure and to evaluate the "signs" that separate the true homosexual from one who confesses "urges," but who experiences some degree of inhibition in the expression of these urges.

Approximately 200 male homosexuals were seen and evaluated from a psychiatric and psychological point of view. The ages ranged from 18 to 30. The type of participation in homosexual acts varied; some were partial to sexual oralism, others had indulged in every form of homosexual perversion. The beginning of the homosexual trend was indicated by infantile sexual patterns, namely, masturbation during puberty. This act was later supplemented by mutual masturbation and as the individuals advanced through adolescence, they participated repeatedly in both the active and passive rôle in fellatio. Occasionally, they had attempted sodomy but it seemed to them "dirty," "messy" or "not nice." Some had attempted normal sexual intercourse but their satisfaction was incomplete and the experience frequently seemed to them disgusting. This feeling of disgust, however, was limited to women as sexual partners. Almost without exception these men revealed strong childhood attachments to their mothers or mother surrogates which continued throughout adolescence and persisted into adult life.

Frequently these men described feelings of empathy that attracted them to other males. There are undoubtedly certain secondary sexual characteristics which distinguish the homosexual, and which are responsible for this feeling. To them it is a

"spiritual" feeling, but the homosexual's gait, poise, timber of voice, facial appearance and clothes are certainly contributing factors in this psychic recognition. The esthetic interest which absorbs so many of these men is an additional bond that ties them to their own kind.

The Bellevue-Wechsler test was used to determine the intelligence of the group. With the exception of two mental deficient (I. Q.'s below 65) the entire group had I. Q.'s of 90 or above, which is the normal limit of average intelligence. The group contained no psychotic individuals and with the exception of the two mental deficient, were all men who were aware of their homosexual drives, able to appraise the universal disapproval of their perversion but who nevertheless made little or no attempt to channelize their sexual expression into normal paths.

Questioning revealed a specific type of reaction which was common to those who were confirmed in the practice of sexual oralism. These homosexuals appeared to progress from a generalized to a specific and localized reaction. The homosexual who participates in oral practices in his formative and adolescent years receives his sensations throughout his entire body; during fellatio his penis is erect and an orgasm generally follows. The satisfaction from the act can be said to be "felt throughout his body," and he receives satisfaction from the orgasm. As the oral pervert grows older there is a transition from this generalized reaction to one that is purely oral; during fellatio the penis is limp and orgasm occurs infrequently. His satisfaction no longer permeates or innervates the body as a whole but seems to center in the region of the lips, mouth and oropharynx. This definite localization of sensation remains permanent with the confirmed fellator. It may be one of the reasons he is unable to alter the pattern of his sexual expression; however, it is one of the diagnostic "signs" that distinguishes the overt from the latent homosexual. The

following three typical cases illustrate the development of this specific reaction.

J. J. was an 18-year-old white boy who had completed the sixth grade of school. He failed in several classes. Since school was too heavy a burden for his inadequate personality he was frequently truant. At the age of 14 he was apprehended for truancy and sent by the juvenile court to a well-known training school for four years. It was here that he began his homosexual practices. Although he infrequently attempted sodomy, he derived his greatest pleasure from fellatio. This practice increased in frequency as he grew older. He stated that originally he "felt good all over," but as his practice of fellatio continued there was the localization of sensation in his lips, mouth and throat. The fluid as well as the penis itself were exciting and satisfying and there was no other explanation for this feeling of pleasure. When he was released from the training school at the age of 18 he attempted sexual intercourse but considered it revolting, dissatisfying and dirty. Consequently his homosexuality continued unabated. He tended to pick his partners by a certain feeling that possessed him about the "other fellow." It was a "spiritual" attraction that he was unable to explain. This youth had an I. Q. of 90, was dull in intelligence, restricted in judgment and lacking in insight. He was strongly attached to his mother, infantile and immature. He was not psychotic but was suggestible and had no insight into his situation.

P. P., a man of 25, was aggressive and domineering. He had no psychopathic background in his early youth. He graduated from high school and attended pharmacy school but never completed it. He was above average in intelligence but lacked judgment. At the age of 10 some other boys taught him to masturbate. At 12 he was practicing mutual masturbation regularly and had also attempted sodomy but disliked it. At 14, he was "blown" and that appealed to him. He solicited these acts but it was not until the age of 17 that he rather hesitatingly attempted the rôle of fellator. Subsequently he acted as both the active and passive partner. Two years later, his homosexual acts became increasingly frequent and he was now more aggressive in his practices. He relates that it "gripped" him and that the sensation of "goodness" was now more localized than generalized. He also states that at times his penis was erect but at other times it was limp and he would be without orgasm. His specific desire for fellatio continued. He was not effeminate, but was interested in art and music. He appeared emotionally mature but the homosexual drive was compelling. He accepted it as part of his personality and rejected the possibility of any readjustment. This individual, also, presented a picture of strong maternal attachment which never diminished in intensity. There was no evidence of psychosis or any mental deterioration.

W. B. was an extremely sensitive youth of 19 who had been over-indulged and over-protected by his mother. He was an only child and his mother

catered to his whims. She attempted to pick his companions, and to keep him away from the "bad boys." He completed high school, was above average in intelligence, and his main interests were music and drawings. At the age of 15, he practiced mutual masturbation, and was taught pedication by one of his friends. These practices continued for a period of one year when a close friend performed fellatio on him. After several such instances, the practice became reciprocal. He eventually became the sole performer of these acts and enjoyed them. He states that he experienced a "hungry" feeling in his mouth and throat; he visualized the act and had to partake of the practice. His one experience at sexual intercourse was unsatisfactory and incomplete and he never attempted it again. This youth also stated that his sensation of satisfaction was localized. When he first began the practice it was agreeable all over his body, but later there was a transition to the oropharynx.

This youth was not psychotic and made an attempt at some readjustment but whenever his desires were aroused he reverted to his homosexual practices.

The latent homosexual's reaction present an interesting contrast to the overt homosexual. He describes his satisfaction as more general than local and states that bisexual trends are not uncommon. When he is drinking or under the influence of alcohol, however, the homosexual drive becomes manifestly greater and his generalized feelings of satisfaction are then more specifically localized. The following case history of a latent homosexual will serve to illustrate this point and demonstrate the transition from the latent to the overt expression of homosexuality.

W. L. was an effeminate, ineffectual youth of 24. On interview he appeared fearful, apprehensive and mildly dejected. He confessed to homosexual drives which he had begun to notice at the age of 15. He had completed the 10th grade of school and had average intelligence. He had no special interests and while at high school participated in no sports or extra-curricular activities. His occupation had been farming at which he had worked intermittently, but even that was not sustained. He began masturbating at 14, and at 15 indulged in the act with others. When he was 16, he permitted sodomy to be performed on him but the experience had little appeal for him. He had also allowed fellatio to be practiced on him on several occasions and found that it stimulated him. However, he suffered conflict over his homosexual drives and states that he married hoping to lessen these tendencies. He enjoyed sexual intercourse with his wife, did not practice cunnilingus and for a short time made a fair heterosexual adjustment. However at the end of 6 months, his interest in his wife lagged. He

began visiting various bars, drinking heavily and participated in fellatio both as an active and passive partner. Drinking released his latent homosexual drive, he divorced his wife and continued his activities around the bars. Sometime later he developed a "crush" on another young woman and after a quick courtship remarried. Once more, he hoped for a normal way of life but again in a short time, tired and drinking, his inhibitions were released. The subject stated that he received some satisfaction from sexual contacts with women but there was gradual shifting of his desires to oral sexualism. His homosexual urges invariably manifested themselves after alcoholic stimulation. He also noted that his sensation of satisfaction was increasingly oral. In the years to follow his trend will undoubtedly become completely overt.

This man had some mild psychosomatic complaints but never to the degree that medication was necessary. He was not an explosive or spontaneous personality; nor was he psychotic in any degree. He had limited judgment and no mature reasoning ability. This case is typical of the latent homosexual who makes the gradual transition to the more active, overt pervert. The drive had always been present and with the proper stimulation expressed itself.

In the foregoing pages it has been noted that the sensation of the true homosexual, who is active in fellatio, emerges rather gradually from a state of generalized well-being to a localization of these sensations. This localization of sexual satisfaction may be a reversion to infantile behavior. The baby derives its pleasure from suckling at its mother's breast or the nipple of a bottle and there is a stimulation of the oral erogenous zone. The gratification of the child must be oral originally but eventually

it becomes generalized. With the homosexual the process is reversed. The generalized feeling becomes eventually localized in the region of the oropharynx. It cannot definitely be stated what causes this. It may be surmised behavioristically that the child learns to feed at its mother's breast, then at the bottle, and eventually feeds itself but that there are still present certain dormant processes that the individual originally learned. These are later released to indicate themselves in oral eroticism.

In the latent homosexual conflicts may still exist but he is in a period of transition that leads toward the overt expression of his tendencies. The overt homosexual admits the existence of his problem and accepts it. The overt homosexual who indulges frequently in fellatio feels a localization of sensation. This localization of sensation may be useful in distinguishing the true fellator from the malingerer who apes homosexuality but does not have the knowledge to describe the same localized sensations found in the true homosexual.

It is also interesting to speculate whether or not the female fellator's satisfaction in the act comes from this same localized sensation of pleasure. If so, it may be, that the male fellator's continued practice of the perversion is because of a confirmed addiction to this type of stimulation, which the male can only obtain by homosexual relations, rather than because of an immutable attraction to his own sex.

THE SELECTEE AND HIS COMPLAINTS

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The routine use of psychiatric questionnaires to aid in the sifting of military selectees became an accepted practice during the recent conflict. The questionnaires (Fig. 1) used in this study were modifications and extensions of those we had previously used. An attempt was made to group, for ready scanning, questions forming symptom-complexes and questions having a psychiatric inter-relationship. Over 20,000 selectees were given the questionnaire used in this study. The examiners also used in evaluating the selectee all available information such as: school records, work records, medical and social service reports.

In Fig. 1, the author has tabulated the completed questionnaires of 1300 selectees. Columns I, III, IV represent some of the selectees examined during February 1944; column II represents some of the selectees examined during June 1944. In columns I and II are selectees rejected for psychiatric reasons. (Those individuals rejected for mental deficiency or for failure to pass the pre-induction psychometric tests are not included in this series.) Column III contains selectees who passed the neuropsychiatric examination but were rejected for physical reasons other than neurological. Column IV lists accepted selectees. The questionnaire used in June was a modification of the form used during February 1944 (see Fig. 1).

During February 1944 the induction station psychiatrists were evaluating selectees on the basis of "Mobilization Regulations 1-9,"¹ as modified by a memorandum which stated that individuals predisposed to or suffering from psychoneurosis would be rejected. During this period the psychiatric rejection rate, excluding mental deficiency and those who failed their pre-induction psychometric tests, was approximately 20 percent. The psychiatric criteria by which selectees were examined in June 1944 were modified by Technical Bulletin Med. 33, April 1944 which stated that only individ-

uals suffering in the past and/or present from a personality disorder, partially or completely incapacitating, would be rejected. During this period the psychiatric rejection rate was less than 10 percent. It should be noted that about the beginning of June 1944, Selective Service directives modified induction policies so that fewer individuals over the age of 26 years were examined.

Under each column heading opposite each question is listed the percentage of individuals in each group who answered these questions in the affirmative with the exception of questions 15 and 16. The percentages shown for questions 15 and 16 are for those who answered in the negative. The following is an analysis of the replies to the questions, with particular emphasis on such details as the author feels significant:

Questions 1 and 2 referring to the selectee's family were not given specific weight by the examiner except as a part of the general picture. Where there was a question of possible congenital predisposition such as in epilepsy, migraine, etc., the item was given further attention. Heart trouble, rheumatism, weak spells, etc., in parents were often considered by the selectee as of the nature of a nervous breakdown. Psychoneurotics and psychopaths frequently gave a history of familial nervous trouble(1); the nature of their complaints or ailments frequently paralleling those of their parents. Selectees coming from broken families were considered definitely greater risks(2) than those coming from a stable, secure parental environment.

Question 3: Discharges from the National Guard or the Civilian Conservation Corps were frequently listed as military discharges.

Question 4: The selectee's evaluation of his health frequently varied directly with his eagerness or antipathy to entering the military service. Those individuals who considered their health bad answered most of the questions in the affirmative. (In column II, those that did not answer this question were not pressed for an answer.)

¹ Standards of Physical Examination During Mobilization.

FIG. 1
ANALYSIS OF COMPLAINTS OF 1,300 SELECTEES

Questionnaire		I N-P rejections (300 cases) (Feb. 1944)	II N-P rejections (300 cases) (June 1944)	III Organic rejections (300 cases) (Feb. 1944)	IV Accepted selectees (400 cases) (Feb. 1944)
Name.....	Age.....Home City.....County.....				
Age you left school.....	Last year of school completed.....				
Where you brought up on or in city () or farm ()?					
Civilian occupation.....					
<i>Civile correct answer</i>					
1. Is there nervous trouble or insanity (crazy) in your family?...	Answers				
2. Do any members of your family have:	No Yes				
3. Nervous breakdowns, fits, convulsions or epilepsy?...	No Yes				
4. Have you ever had a military discharge?...	No Yes				
5. How is your health? Excellent Good Fair Bad					
6. Do you visit doctors often about your health?...	No Yes				
7. Do you stay away from work often because of sickness?...	No Yes				
8. Did you ever lose a job because of nervous condition?...	No Yes				
9. Have you ever had a nervous breakdown, been treated in a hospital for nervous disease, a State Hospital or a sanatorium for nervous patients?...	No Yes				
10. How often do you get drunk: Monthly () Weekly () More often ()?					
11. How many times have you been in jail?					
12. How many times have you been arrested for drunkenness?					
13. How many different jobs have you held in the last 3 years?					
14. Do you use drugs like morphine, dope, etc?...	No Yes				
15. Do you like to go out with girls?	No Yes				
16. Do you like to go to parties?	No Yes				
17. Do you like to be alone most of the time?	No Yes				
18. Do you have trouble making friends, do people think you are queer?...	No Yes				
19. Do you hear voices when no one is around you?	No Yes				
20. Are people against you and trying to do you harm?...	No Yes				
21. Have you ever had fits, epilepsy, or fainting spells?	No Yes				
22. Have you ever had a bad lick on the head or a skull fracture?	No Yes				
23A. If you did, how long were you unconscious?...	No Yes				
23B. Do you ever have any trouble seeing, hearing, speaking, smelling, tasting or feeling?...	No Yes				
24. Have you ever been paralyzed, unable to move arm or leg?...	No Yes				
25. How old were you when you stopped wetting the bed?...	No Yes				

FIG. 1.—CONTINUED

Questionnaire		I N-P rejections (300 cases) (Feb. 1944)	II N-P rejections (300 cases) (June 1944)	III Organic rejections (300 cases) (Feb. 1944)	IV Accepted selectees (400 cases) (Feb. 1944)
26. Have you walked, or do you walk in your sleep?.....	No Yes	12% 8%	22% 15%	10% 6%	7% 7%
27. Have you stuttered, or do you stutter?.....	No Yes	34% 35%	40% 35%	20% 17%	26% 17%
28. Have you bitten or do you bite your finger nails?.....	No Yes	35% 42%	40% 47%	17% 20%	15% 21%
29. Have you had, or do you have nightmares?.....	No Yes	43% 48%	61% 71%	20% 35%	21% 37%
30. Do you suffer from a pain in your chest?.....	No Yes	71% 70%	71% 62%	24% 47%	21% 42%
31. Do you suffer from a rapid heart beat?.....	No Yes	61% 61%	72% 72%	33% 33%	34% 34%
32. Do you suffer from dizzy or blackout spells?.....	No Yes	41% 18%	40% 24%	24% 8%	16% 8%
33. Do you tire easily?.....	No Yes	14% 18%	14% 27%	9% 7%	5% 5%
34. Are you often short of breath?.....	No Yes	59% 38%	67% 52%	37% 14%	43% 14%
35. Do you suffer from easy sweating of hands, arms, feet?.....	No Yes	41% 53%	47% 29%	19% 32%	25% 25%
36. Do your nerves get torn up, or do you get the weak trembles?.....	No Yes	14% 11%	14% 14%	3% 2%	1% 2%
37. Do you suffer from stomach trouble?.....	No Yes	28% 11%	41% 16%	8% 7%	13% 10%
38. Have you ever vomited up blood?.....	No Yes	68% 18%	53% 16%	54% 7%	39% 3%
39. Do you suffer from stomach ulcers?.....	No Yes	3% B: 11%	E: 3% B: 16%	E: 4% B: 7%	E: 10% B: 3%
40. Do you suffer from diarrhea (loose bowels)?.....	No Yes	A: 30% C: 70%	....	A: 38% C: 62%	A: 55% C: 45%
41. Do you tend to get sick easily?.....	No Yes				
42. Does the sight of blood frighten you or make you sick?.....	No Yes				
43. Do you have pains in your back?.....	No Yes				
44. Do you suffer from foolish fears?.....	No Yes				
45. Did you ever attempt suicide or have you thought of it seriously?.....	No Yes				
46. Are you sometimes blue for weeks or months at a time?.....	No Yes				
47. How do you think you will be in service? Excellent Good Fair Bad					
48. Do you feel you would be of more value to your country in the					
49. Army () or in civilian life? () (Check answer.).....					

* Question changed to: "Have you suffered or do you suffer from any nervous condition?"

† Not at all.

‡ Questions 26-29 asked in present only, e.g., "Do you walk in your sleep?"

§ Question only on revised form.

Question 5: Affirmative answers frequently meant a routine physical examination or check-up.

Question 6: Mild upper respiratory infections were the basis for many affirmative replies. Frequently individuals who gave affirmative answers were found by further oral questioning to have actually lost little time from work, *e.g.*, some "played" sick to the limit of their sick leave allowance.

Question 7: An affirmative answer was frequently of little significance. Often the selectee would try to impress the examiner with his nervousness by asking him to look at the trembling of his out-stretched fingers. Hyperthyroidism was a rare finding.

Question 8: This question for many selectees indicated their optimum level of adaptation. For example, selectees frequently mentioned being too nervous to stand the noise and labor of the shipyards and having to return to their farms. Some, it was found on careful questioning, who answered this question in the affirmative actually returned to their farms solely to "make a crop."

Question 9: Selectees frequently misinterpreted this question and listed hospitalization for organic conditions. They would mention vague ailments such as back trouble, kidney trouble, arthritis, weakness, trembling, etc., as having been nervous breakdowns.

Question 10: Some patients checked "monthly," though they never became drunk, because this was the least frequent of the possible answers. (A space "not at all" was put in the revised questionnaire, column II.)

Question 11: Positive answers often referred to arrests for traffic violations. Frequent traffic violations and "accident-proneness" were considered significant. Individuals whose police record consisted of arrests for fighting, if not complicated with alcoholism, were often accepted, if their work record was satisfactory. A high proportion of these seemed to make a satisfactory adjustment in such adventurous branches as paratroopers, rangers, marines, etc. Occasionally, an individual was found who listed numerous arrests, yet a check of police records and a social service check-up failed to substantiate his statements.

Question 13: Those employed in the con-

struction field often listed frequent changes of jobs; therefore, positive answers were considered significant only where the selectee had frequent difficulty with his employers or fellow-workers or was unable to give a satisfactory explanation for frequently changing jobs. Emotional instability, paranoid traits, and alcoholism were among the personality disturbances that often led to frequent changing of jobs.

Question 14: Drug addiction was admitted to but rarely. Occasionally individuals listed the taking of aspirin or a patent medicine as the taking of dope.

Question 15: This question was occasionally answered in the negative by individuals who were already married. The answer was always evaluated in conjunction with those to questions 16 to 20.

Question 19: Probably 95 percent of the positive answers to this question were based on the fact that the individual thought he sometimes heard his name called.

Question 20: Occasionally positive answers referred to an attempt of a draft board to get the selectee into the military service. Husbands separated from their wives frequently blamed their wives or in-laws as being responsible for their having been called for induction.

Question 21: Only four of the neuropsychiatric rejections (column I) were for epilepsy. Most of the positive answers referred to "blind spells" or "blind staggers" or faintness when the selectee sat up suddenly, saw blood or an accident, or became overheated. Farm workers frequently offered complaints of "blind staggers" or "blackout spells." These complaints may be due in part to strenuous work in hot weather accompanied by excessive perspiration and chloride loss, or vasomotor instability with mild, transitory lowering of the blood pressure. The factor of transitory hypoglycemia as well as a carotid sinus reflex was considered.

Question 22: A study of those answering this question in the affirmative revealed that 63 percent of those in column I, giving a history of head injury, also complained of headache. In column III, 58 percent of those with a history of head injury complained of headache and in column IV, 56 percent.

Question 22A reveals the percentage of those in column II who gave a history of unconsciousness of a half hour duration or more.

Question 23: Those who complained of poor vision or weak eyes, in the absence of a refractive error, had their history checked for previous manifestations of hysteria. Contracted visual fields, with or without color reversal were sometimes found. Some selectees gave a history of occasional loss of hearing. This, as well as difficulty in speaking, often was only an accompaniment of an upper-respiratory infection.

Question 24: An individual frequently considered himself as having been paralyzed when at one time he had suffered a fracture or traumatic injury of an extremity.

Question 25: Seven selectees (column I) were rejected for enuresis persisting to the time of the examination. Not infrequently selectees would falsely claim persistent enuresis. This was especially true of individuals in whom enuresis had persisted to a late age. The delayed development of sphincter control was usually considered the result of anxiety in early childhood resulting from a hostile environment. The subsequent emotional immaturity often was manifested by varying degrees of psychoneurosis or psychopathic personality.

Question 26: About 2 percent of the selectees complained of sleep walking occurring at least once every three months, persisting to the time of the examination.

After tabulating the June selectees listed in Fig. 1, a tabulation was made of the next 100 selectees giving a history of somnambulism. Their age at the time of the examination and the age at which their sleep walking stopped were noted. The earliest at which somnambulism stopped was the age of 6 years. Twenty-one stopped before the age of 13 years. Twenty-five stopped between the ages of 13 and 18 years. Twenty-six stopped between the ages of 18 and 37 years. Twenty-eight professed to somnambulist episodes at least once within the past three months at the time of the interview.

Question 27: Stuttering was comparatively rare and was usually considered due to anxiety. Some individuals with extreme stuttering and stammering were able to speak

freely and easily after the intravenous injection of a few cc's of sodium amytal. In these individuals, the defect was considered as being due to anxiety.

Question 28: Persistent finger nail biting was a frequent finding, so much so, that the writer, soon after completing the first part of this series, listed the next 100 consecutive cases of nail biting seen during February 1944. In this special group, the rejection rate for those in the group who had bitten their nails, but had stopped, was 16 percent; and for those in the group who still did, 33 percent. Of this hundred, 63 were still biting their finger nails. In June 1944, over 90 percent of those with a history of finger nail biting, past or present, were accepted.

Question 29: A positive answer to this question was not considered serious unless the nightmares were frequent, had a tendency to seriously interfere with the selectee's sleep, or indicated the presence of a fear incompatible with military service, *e.g.*, a fear of firearms, homosexuality, etc.

Question 30: The intensity of the pain complained of and its site varied considerably. About 35 percent of those complaining of pain in their chest located the pain in the left nipple region. I did not consider pain at this site as pathognomonic of neurocirculatory asthenia, as have some writers.

Those answering questions 30 to 36 in the affirmative fell into several groups, chiefly those with organic disease and those with psychoneurosis anxiety (anxiety reaction or hysteria). In this last group where anxiety was a prominent symptom, it was usually accompanied by an elevated systolic blood pressure and tachycardia.

There was one group of individuals who displayed no objective evidence of anxiety, had a normal blood pressure and pulse rate, yet answered most, if not all, the questions 30 to 36 in the affirmative. In a number of these individuals, it was noted that a mottled erythema (flush) appeared over the selectee's upper chest and shoulders while he was talking to the examiner. Within a period of seconds this erythema frequently became confluent, and after a minute or two disappeared. They were considered to have

a vasomotor instability or vegetative imbalance accompanying periods of anxiety.

Question 32: Most of the answers received were similar to those for question 21 which referred to fainting spells. Those who complained of dizzy or "blackout spells" or "blind staggers" often stated that they also suffered from "torn up nerves" and "weak trembles."

Question 35: An affirmative answer was not considered significant unless accompanied by other evidence of an anxiety reaction, or the perspiration was so excessive as to cause soggy and maceration of the skin; for example, the soles of the feet.

Question 37: The complaint of stomach trouble frequently referred to occasional dyspepsia. Those individuals complaining of stomach trouble, or stomach ulcers, who presented satisfactory documentary evidence of this condition as proving incapacitating or X-ray evidence of pathology were rejected. In the absence of documentary proof, those individuals whose histories were suggestive of peptic ulcer were given a GI series. About 20 percent of those X-rayed proved positive for peptic ulcers. In column I, 12 percent of those who complained of stomach trouble also said they suffered from stomach ulcers; in column III it was 6 percent and in column IV it was 6 percent. Those selectees with a history of undue pre-occupation with their GI tracts, such as a marked fadism in foods, a long history of rigid dieting or frequent medical care, were usually rejected.

Question 40: Selectees answering this question in the affirmative had stool and proctological examinations. If these were negative, they were accepted unless the history was indicative of idiopathic ulcerative colitis.

Question 41: Headaches were evaluated on the basis of etiology and degree of disability. If not disabling nor likely to prove so, the individual was accepted. Individuals complaining of headache, who had a history of skull fracture, or a loss of consciousness of 3 hours or more following an injury, etc., were carefully checked neurologically, by laboratory, X-ray and psychological tests.

Question 44: In the absence of a significant personality defect or X-ray findings, back pain was evaluated on the basis of

history, physical, neurological findings, and laboratory tests were indicated.

Question 45: An affirmative answer usually meant that the selectee felt he worried too much or needlessly. Frank, incapacitating phobias were rarely elicited.

Question 47: The diagnosis of a cyclothymic personality was infrequently made. "Manic-depressive psychosis" was a very rare diagnosis. Those individuals whose personality defects had schizophrenic coloring were considered schizoid or schizophrenic personalities.

DISCUSSION

The answers of 1300 selectees to a psychiatric questionnaire revealed that the average selectee offers numerous complaints, most of which in themselves are usually of no great significance. Often, in regard to the selectee's state of health, they were more indicative of the condition of his morale and functional well-being than of organic pathology. It is well recognized that no selectee should be accepted or rejected merely on the basis of his answers to a questionnaire; one must evaluate the total personality. The questionnaire is merely a time saving device and not a diagnostic instrument. Tests of skill, education, intelligence, ability to learn, etc., should be similarly evaluated. If the questionnaire had been given to college students as part of a classroom exercise, the answers probably could have been considered quite reliable. It is altogether another matter when they are submitted to selectees who know that their future status will be partially determined on the basis of their answers. Procedures that to a certain extent attempt to determine the acceptability of selectees by scoring their answers on a questionnaire are, in my opinion, fallacious.

Although my study of these predisposing factors (insecure home life and persistent anxiety "neurotic traits" in childhood) are too incomplete at present for statistical analysis, they indicate that these factors were considerably higher in combat casualties than they were in these accepted selectees. That by no means indicates that the presence of primary behavior disorders in childhood precludes a soldier from functioning satisfactorily in combat. I have had occasion to see

soldiers and marines who had performed well through several of the hardest campaigns in the Pacific Theater who gave histories of having had several primary behavior disorders (neurotic traits) in childhood, some persisting to the time of the interview. Yet, these individuals exhibited no overt behavior defects such as would preclude their utilization in future combat.

Although it is now generally recognized that any personality will break if placed under sufficient stress, nevertheless, those individuals whose pre-military history indicates the presence of a neurotic character are less likely to make an adjustment to and sustain the emotional demands of military service. For the most part, individuals who became psychiatric casualties after a few days of combat and were not, after a brief period of hospitalization, returnable to duty were individuals with severe personality defects prior to their induction into the military service.

High morale² helped retain as military

² War morale has been considered "as synonymous with the determination to achieve military victory over the national enemy" (3). It may be a plus or minus depending on the final sum which is secured by adding up such factors as: quality of leadership, military training, esprit de corps, material factors on the home front, the military situation, creature comforts, disease, etc.

The individual soldier who exhibits a willingness to return to combat usually does so because of some knowledge of what he is fighting for (although his concepts may not be crystallized into high sounding phrases), a hatred of the enemy, a strong attachment to his comrades and organization, a fear of his comrades' scorn and social condemnation if he should "quit." He has an individual integrity which in part consists of a reluctance to "let down" his comrades, superiors and country.

Those members of a military unit that have been separated for long from their friends and home and have repeatedly seen the ranks of their comrades thinned by death and injury, require more than esprit de corps, a brief rest and good food to return them psychologically prepared for combat. They must, as Mira (3) has pointed out, fear the consequences of defeat, hate the enemy leaders responsible for the war, love the consequences of victory, and be supported by a civilian population who should approve the sacrifices that they themselves are called upon to make. Deprivation, suffering and danger must be shared by all the people and authorities, and not just the fighting men. All must understand and approve the political and moral basis for the war. The forces leading him to combat must be stronger than those drawing him home.

effectives both those with "normal" character structures and those with "neurotic" characters. The average individual who broke down during combat did so because of an overwhelming hostile environment that isolated and threatened him with annihilation. The basic personality structure, morale, fatigue, disease, etc., all affected the threshold level at which the soldier broke, and the extent to which these were corrected determined the readiness with which his symptoms were cleared up.

Current psychiatric opinion considers malingerers a rarity, and even when diagnosed as such a form of psychopathy. Conscious exaggeration of symptoms (shrimshanking) and lying were quite frequent among selectees. (When the individual adopted more than a weak, flimsy, ramshackle defense against the examiner, and formulated a carefully thought out, artful plan to evade the military service, I considered him a malingerer.) Although malingerers were rare, they were not unknown, nor did all of them fit into the usual criteria for psychopaths. An occasional one was a so-called "pillar of society."³

Some psychiatrists feel that the selectees who voice numerous complaints should be rejected, as they consider them, *ipso facto*, a poor military risk. In many instances, this merely indicates the state of the individual's morale, and although poor morale is a serious defect, it is often a labile characteristic and not necessarily a deep-rooted, permanent psychiatric defect. An induction psychiatrist should reflect more than sweetness and light; some skepticism and group responsibility are healthy attributes.

In the course of examining tens of thousands of selectees, the lack of knowledge on the part of many of them concerning in a broad sense the world about them and the reasons "why we fight," exceeded my most pessimistic expectations. Many of these individuals possessed but a meager education, and outside of their immediate community only limited social contacts and a narrow

³ The psychoanalyst might hasten to point out that for every act on a "conscious" level, there is an even larger substratum of sub-conscious motivation. I am not in disagreement with this viewpoint. What a malingerer is, is a matter of definition.

cultural horizon. They had found during this war opportunities unparalleled in their experience. Take the selectee who, instead of earning nine dollars a week on a farm, receives some sixty dollars a week as a rigger in the shipyards and is now enjoying such blessings as flow from security. This individual, at the same time, is about as familiar with quantum mechanics as he is with world politics and the deeper significance of current events. He feels little "group responsibility"; therefore, the numerous complaints he voices at the induction station follow logically. To a certain extent his behavior is a "cultural norm." All too often have I seen men receive congratulations when rejected and condolences when accepted.

Too many soldiers were labeled "psycho-neurotic." This was partially due to the nosology of the psychoneurosis which proved even more deficient during the war than in time of peace. Goldstein(4) had advised, "we should not speak of war neuroses but of anxiety states and conversional states due to war situations." Although our culture has given rise to a high incidence of neurotic character structures (neurotic individuals), it was shown to be inadvisable to consider situational maladjustment in a previously normal individual a "psychoneurosis." Unless the soldier's condition was

merely the carry-over of a neurosis from civilian life, it might have been advisable to label him "military maladjustment" if he were to be medically discharged. Then, should a neurotic condition manifested in the military service continue to be present after returning to civilian life, on the basis of a long term view, he should be considered for the diagnosis of psychoneurosis.

SUMMARY

The incidence was given of complaints among certain groups of selectees as ascertained by the use of a psychiatric questionnaire. A number of observations were made as to the significance of these complaints and their evaluation by the psychiatrist at an induction station. Morale as a prognostic factor is discussed, and in the less severe neurotic morale was considered the determining factor as to suitability for military service.

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PSYCHONEUROTICS IN COMBAT

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Psychiatry is undoubtedly a science, but not so exact a science as some other branches of medicine. To it cannot be applied Koch's principles. Emotions, proper or improper, cannot be cultured, nor measured in diopters or millimeters. Emotions are considered as to kind and intensity, and measured quantitatively by "a lot or a little," "too much or not enough." When these variables reach a certain (?) intensity or lack thereof, a diagnosis of "psychoneurosis" may be made. Physicians, and laymen too, recognize psychoneurosis as a syndrome of emotional difficulties, but the word to each person may mean something different. And even to psychiatrists whose stock in trade it is, its meaning is not exact—as for instance myopia or carcinoma, diabetes or scarlet fever.

In the army a psychiatrist cannot be concerned with theory or semantics. A soldier is either a psychoneurotic or he isn't. He is either mildly, moderately or severely so; and he is so described. But before completing the diagnosis, the psychiatrist must consider whether or no the soldier is fit for combat, or for overseas duty, or for any duty; and having determined this (with or without the aid of a crystal ball) he applies the proper description of intensity—"mild" being usually fit for any duty and "severe" usually fit for no duty. It is apparent that the psychiatrist must first make a prediction as to the soldier's future adjustment and then make a diagnosis suitable to that prediction. The psychiatrist must also bear in mind the state of the nation's and the army's manpower situation as reflected by medical directives, the tenor of which may change frequently from "All neurotics must stay in the army" to "All of them must be forthwith discharged." In theory present attitudes lie somewhere between.

It is indeed unfortunate that neurosis is not black or white, and that there are innumerable shades of gray. In these shades of gray lies the army psychiatrist's dilemma. He must ponder long the problem of "how

much neurosis is compatible with this or that duty and especially with combat duty?"

It is not always possible in the army to dispose of men who appear to be undesirable. Furthermore it is, and has been, one of the functions of the division psychiatrist to salvage and to encourage the retention of men rather than to increase the loss of manpower. For these reasons and others, there were remaining in my division after the gang plank was raised, 138 men who during training had presented sufficient adjustment difficulty to necessitate psychiatric attention. Most were the chronic complainers who were referred by their unit surgeons. They represented an assortment of neuroses and so-called constitutional psychopathic states. It was with some apprehension that I viewed their future adjustment to combat, and in order to salvage some satisfaction through the virtue of prophetic powers, I labelled the records of 25 of these as especially poor risks. I anticipated seeing most of the group of 138 in the first few days of combat or perhaps even earlier, for these were the "known" problems.

None of these cases had received any intensive treatment, although all had received superficial therapy—usually in one rather brief diagnostic interview. My primary aim was to make an attempt at proper assignment, and even this was not always possible.

During training some of the personality disorders appeared to be mild, some rather severe. A few brief case histories of the latter type will indicate the personality disorders involved:

CASE I.—Soldier aged 25—first seen August 1944 at which time he had 22 months' service. His family history was not significant. He had completed the 8th grade at the age of 14. Civilian work history was poor, he had never been able to hold a job because he became nervous. In the Army he had many different assignments, in none of which did he adjust. In order to get out of one unit, he volunteered for the Paratroops. He said he left the latter organization because of a back injury. His complaints were headaches, ease of fatigue, shortness of breath, stomach trouble, weight loss, insomnia, nervousness, fainting on two or three occasions, and continuous back pain. (There was

no evidence of any organic disease.) His unit commander stated, "Soldier has continually avoided work, disappears without permission, frequently becomes intoxicated, misses formations, and constantly offers physical complaints. When ordered to go over the night infiltration course, he disappeared in the darkness and returned to barracks." He was seen in consultation several times and finally in September 1944 his discharge by Sec. VIII¹ was recommended. Due to overseas shipment, this was never carried out. Soldier served as a litter bearer throughout combat and at termination of the war was still on duty.

CASE II.—Soldier aged 24—married—first seen September 1944, at which time he had 9 months' service. Family history—he was the youngest boy of three children; father died when he was 4. Soldier completed 6th grade at the age of 14. Work history was fairly good. He complained of dizzy spells, nervousness and especially of pain in an old herniorrhaphy scar and in the testicles. He was extremely dissatisfied with his lot; said he had no enemies, didn't know why he was fighting or why he should be in the army. His company commander said soldier was undesirable and could do no job well. Because of the soldier's attitudes, he was labelled as a poor risk for combat. He remained on duty throughout combat as a rifleman in an infantry company. He received a Purple Heart for wounds, and a Bronze Star Medal for bravery. At termination of the war, he was still on duty.

CASE III.—Soldier aged 28—married—first seen June 1944 at which time he had 4½ years' service. He was the youngest child in the family. Family history was otherwise not significant. Soldier completed the 10th grade at the age of 16. He worked on the family farm prior to induction. His chief complaint was pain in a wrist and knee as well as in the scar of an old burn of the back; other complaints were headaches, shortness of breath and nervousness. He had been hospitalized in an army general hospital where the diagnosis was "conversion neurosis" and the recommendation was "Duty in the U. S.—not fit for overseas duty." His company commander found him undesirable and not useful in any capacity. Soldier served in a motor pool of an infantry battalion throughout combat and at termination of the war was still on duty.

CASE IV.—Soldier aged 28—married with two children—first seen June 1944, at which time he had more than 3 years' service. Family history revealed that his parents had been separated for 16 years, and that his mother had been in a state mental hospital for 4 years. Work history indicated intermittent and variable employment. Soldier completed the 7th grade at the age of 16. He complained of headaches, dizzy spells, nervousness. He said that he felt "all tore up" and that he had periods when he remembered nothing he did

for a whole day. During the interview, he was tense and fearful. He had four courts martial for A.W.O.L. He was labelled as a poor risk for combat. During combat he served in an infantry battalion, and received the Bronze Star Medal for heroism. At termination of the war he was still on duty.

At the end of 30 days of combat, only one of the entire group had been evacuated for "exhaustion" (army terminology in medical units forward of evacuation hospitals for psychoneurosis or other psychogenic disorders). No other had been evacuated for any reason—137 were on duty. "Duty" is not a particularly descriptive term for combat in winter, for living and fighting in snow and mud, for cold food and often little sleep, for constant proximity to death or injury, for loneliness and fear—but "duty" is the only available word. During the first month, one had been decorated with a Bronze Star for bravery.

After 60 days of combat—3 had been admitted to the Division Clearing Station for "exhaustion," 134 remained "on duty." In the subsequent 3 months of combat there were no other admissions from this group for "exhaustion." Eighteen had been evacuated or transferred for other reasons (2 had been killed in action, 1 was a battle casualty, 7 were non-battle casualties and 8 were transferred for various reasons). At the termination of the war there were 120 remaining on duty. Nine had received a Purple Heart for wounds, 8 had received a Bronze Star Medal for heroic or meritorious service.

It is axiomatic that neurotics are poorly able to tolerate stress. In a general way, this is probably true. But are all stresses the same to all psychoneurotics, and further, does the neurotic maintain a constant potential to withstand a known stress; or is the potential a variable, subject to change with alterations in personality produced by new experiences? From a dynamic view only the last must be answered affirmatively. On a static basis of interpretation many thousands of men with a wide variation of psychopathies have been rejected for overseas service. There is no known method for measuring accurately the quantity of neurosis or personality disorder and especially of determining its peculiar significance for the individual and its relation to an unknown situation. The basis for rejection is therefore highly empirical and

¹ An administrative discharge (rather than medical) for constitutional psychopathic states.

speculative and subject to all the inequalities of training and experience of psychiatrists. This review of 138 cases certainly does not establish any fundamental truths, but it does indicate that all neurotics do not necessarily break down in combat; just as it indicates that there are some things the average psychiatrist (*e. g.*, the author) does not know, namely:—which neurotics will or will not break down. It is true that in this group, many were assigned to jobs within their capabilities, but no one should assume that any job in an infantry division provides a safe or comfortable existence conducive to the well-being of neurotics.

Is it possible that some (if not many) of those who have been rejected for service and those discharged from the Army with personality disorders could adjust to military service, including combat? There is no doubt that neurotics are not, and would not be particularly happy in the service. There is no doubt that many (although not all) are quick and eager to complain, to consciously exaggerate and dramatize symptoms, and therefore possess much nuisance value. Unfortunately it is often this nuisance value which takes precedence over symptoms and possible assets and actually encourages discharges. Despite all regulations to the contrary, the average company commander does not want men in his company who "cannot keep up," complete all the marches, or who get into trouble. Some company commanders desire only men who should really be classified not 1-A but double 1 double A. It has long been known that there are not enough of these to go around, and that strangely, the average soldier is somewhere between the best and the worst. Pressure from unit commanders to dispose of "personnel problems" or those who do not "measure up" entirely is undoubtedly another factor in disposing of many men—men who could perform adequately (even though not excelling). Of importance then to the manpower problem (as well as the democratic principle of service by all who can perform duty) is the question: Can neurotics function in combat; aided if necessary by therapy, encouragement, or by "force" (*i. e.*, refusal to recognize many neurotic symptoms as justification for release from duty)?

That many psychoneurotics can serve usefully within the U. S. is common knowledge. But in general their induction is discouraged by mobilization regulations, and their assignment to combat is "viewed with alarm."

It is possible that there has been too much emphasis on finding and diagnosing psychoneurosis. How many of the rejected thousands could have adjusted to the service (including combat), no one will ever know. Despite the plethora of tests for detecting neurosis and personality disorders in minutest quantity and severity, there is no reliable measuring stick upon which to base rejection for this or that duty or even any duty at all. Obviously psychotics and totally incapacitated neurotics present no problem. But where is the dividing line for rejection or acceptance for all other gradations of neurosis? Is enough known about personality structure, to warrant predictions of behavior, except in the most general terms and in the most extreme cases?

Certainly a practical laboratory method of determining an individual's tolerance is to expose him to the actual stress involved. From the small group of cases here presented, one can presume that many predictions may be unwarranted.

Perhaps there has been too much concern over negative factors and too little concern over positive factors. Certainly a panting eagerness to detect personality disorder is unjustified, and even when such is more or less obviously present, should we not search more diligently for assets in personality which might be nurtured under proper techniques and circumstances? We know too little of the psychologic motives which keep men in battle. Many neurotics who previously complained bitterly of headaches, dizziness, ease of fatigue and various aches and pains carry on in battle despite symptoms. Some psychopaths who seemed devoid of sense of responsibility, and full of hostility toward the army carry out their duties with distinction. Much has been said of mechanisms of escape—too little about the mechanisms of "sticking it out." Such techniques as stimulation of patriotism, of sense of duty and responsibility, of pride in unit, (and other group feelings) are used with benefit in the army. Could not a similar

program have rehabilitated many civilian neurotics for military service?

It would be well to bear in mind constantly that while the task of the civilian psychiatrist is often to help a patient satisfy himself, and to function efficiently and contentedly, the goal of the army psychiatrist must be efficient functioning of an individual as a soldier without primary regard to his satisfaction or contentment. Symptoms that arise from dissatisfaction are not always incapacitating. Many people suffer in war. The criterion of one's ability to perform mili-

tary duty should not necessarily include happiness at the task.

CONCLUSION

It is not intended that the material presented should be construed as evidence that soldiers with known emotional illness adjust to the Army with the same relative ease as those without these problems. Certainly they do not. But there is evidence that many of them can adjust (although with difficulty) to training and combat.

A REPORT ON THE USE OF THE WECHSLER-BELLEVUE SCALES IN AN OVERSEAS GENERAL HOSPITAL

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A recent review of the literature on the Wechsler-Bellevue test(1) indicated the opportunity for further investigation and data. This report is intended to summarize a relatively brief experience with the use and application of the test in the neuropsychiatric section of the 20th General Hospital, an American military installation, located in Assam, India.

During the period from June 17, 1945 to September 17, 1945, the test was administered to 128 soldiers, an effort being made in each case to analyze the scatter and test performance for diagnostic purposes. The dates during which the test was given coincided with the Assam summer months when the rain and heat of the monsoon are not conducive to optimum test performance. Other factors also contributed to the difficulties. The psychometrician worked in a small room, located in a hospital ward and partitioned off from the rest of the room by a bamboo mat. Through this partition passed all the noise of the ward, including the sound of a radio. The noises made by psychotic patients receiving insulin and electric shock therapy about 20 yards from the psychometrician's office were a constant part of the test situation. Airplanes from a nearby field buzzed overhead, the roar of their motors blending unharmoniously with the loud tones of the radio and the shrill noises of the psychotics in an unending cacophony. All the test results must be evaluated in terms of these conditions which were obviously such as to make this a unique—and far from ideal—setting.

Analysis for diagnostic purposes was made on the basis of the discussion by Wechsler (2) and the manual from the Menninger Clinic(3). The information contained in these two sources was combined to make a table of characteristic sub-test relationships for each clinical syndrome. A scattergram showing the relationship of sub-test scores was drawn up for each subject and was then analyzed in terms of the table to determine

his diagnostic group. The psychologist's report included a statement for each subject indicating in which diagnostic group his scatter and test performance tended to place him. This usually preceded the psychiatric examination and was used by the psychiatrist as an aid in arriving at a diagnosis.

We have compared the psychologist's estimate of the subject made on the basis of analyzing the test performance and scatter with the psychiatrist's final diagnosis in each of the 128 patients tested. An arbitrary scale from 0 to 100 was used to evaluate the degree to which they coincided. If, for example, the psychologist's report indicated that a patient's test performance and scatter resembled that of an *acute* paranoid schizophrenic and the psychiatrist diagnosed that patient as a *chronic* paranoid schizophrenic, the degree to which these two statements coincided was estimated as 75. The results of the comparisons were considered "good" if they ranged from 75 to 100; "fair," if they ranged from 30 to 74; and "poor" if they ranged from 0 to 29. The following table shows the results of this study for the major diagnostic groups.

	No.	Good, %	Fair, %	Poor, %
Psychotics	13	85	0	15
Psychoneurotics ..	62	26	16	58
Psychopaths	22	45	10	45
Normals	12	60	0	40
Total	109	52	8	40

Best results were obtained among the psychotics. In this group, the psychologist's estimate and the psychiatrist's diagnosis coincided 100% in 11 of the 13 cases. Comparisons were considered perfect only when the psychologist's estimate and the psychiatrist's diagnosis agreed as to severity as well as to type of psychosis.

The highest degree of failures was recorded among the psychoneurotics. This may be related to the fact that our syndrome characteristic table listed eight different

forms of psychoneurosis. The results of the comparisons were considered "poor" if the psychologist's estimate correctly indicated the existence of a neurosis but failed to coincide with the psychiatrist's diagnosis as to type and severity of the neurosis.

As seen above, the psychologist's analysis was correctly indicative in 52% of the cases, which is somewhat higher than the 30-40% reported by Rapaport(3).

Nineteen cases are not reported in the above table. These include a group of 10 alcoholics which is discussed below and 9 mental defectives for whom no scatter analysis was attempted. Scatter analysis is not considered practicable for mental defectives except to differentiate them from deteriorated schizophrenics. Their scores are on so low a level as to invalidate the interpretations otherwise given to sub-test relationships.

The group tested included patients hospitalized in the neuropsychiatric section, outpatients and patients being treated in other parts of the hospital who were referred for psychiatric consultation. There were 74 white and 54 Negro soldiers. The median length of overseas service was 18 months, with a range of 4 to 42 months. The median length of total military service was 31 months with a range of 12 to 58 months. Forty-seven per cent of the group were married; 6% had been separated or divorced. Of the entire group, 11% had some combat experience. The remainder were service troops, concerned with building and maintaining the Stilwell Road and convoying supplies over it to China.

Median age, education and IQ of white and negro subjects is shown below:

	No.	Age	Education	IQ
Whites	74	26	8½ years	91
Negroes	54	25	8 years	80
Total	128	25	8¼ years	84

The low IQ scores are explained partly in terms of the adverse conditions under which the test was given. Furthermore, the group included a large number of mental defectives who were referred to the neuropsychiatric section specifically for intelligence tests so that administrative proceedings for separation from the service could be initiated.

The test used is the old Form L of the Wechsler-Bellevue scale, including all twelve sub-tests: vocabulary, comprehension, information, similarities, digit span, arithmetic, picture arrangement, picture completion, block design, object assembly, paper form board and digit symbol. Much of the material for the performance tests had to be improvised, since a full copy of the test was not available.

The alcoholics comprise a separate category since here the clinical diagnosis was arrived at first and the Wechsler-Bellevue test was administered afterward, partly in order to determine whether or not a composite scattergram for the alcoholic could be worked out. Although the group(10) is small, certain characteristic patterns of sub-test relationships were discovered, as follows:

1. There was marked lowering of the performance mean score as compared with the verbal mean.
2. Comprehension was somewhat impaired as measured against the vocabulary level but within normal limits of the test mean.
3. Information was excellently preserved and was superior to the vocabulary level.
4. Arithmetic was superior to digit span.
5. Similarities was well retained, usually equal to or somewhat higher than vocabulary.
6. Picture arrangement was severely impaired and almost always lower than picture completion.
7. Object Assembly was the most vulnerable of all the sub-tests and consistently rendered the lowest score.
8. Block design was the best retained of the performance tests.

There was a striking similarity in the performance of all 10 subjects which tends to indicate the validity of these relationships and the probability that their appearance in a scattergram is diagnostic of alcoholism.

Use of scatter analysis for diagnostic purposes does not imply that a mechanical method of arriving at psychiatric diagnoses has been devised nor is it to be inferred that the psychologist is attempting to take over the psychiatrist's function of making clinical diagnoses. Scatter analysis must be regarded as a diagnostic aid in much the same sense that biological laboratory procedures are a diagnostic aid in general medicine. In addi-

tion to being a helpful and important diagnostic aid, scatter analysis can be of value in differential diagnosis and it can often provide the psychiatrist with leads to be followed through in his examination of the patient. In one interesting instance, superficial psychiatric examination of a patient uncovered no significant pathological material. His test performance and scatter, however, clearly resembled that achieved by an acute paranoid schizophrenic. This led to further clinical investigation during which sufficient psychotic material was produced to warrant the patient's being dispositioned to the Zone of the Interior as an acute paranoid schizophrenic, which was the final diagnosis.

This single instance would almost justify the time spent in analyzing test performance and scatter since it contributed in no small measure to preventing the return to duty of a psychotic with possibly serious results. It is unnecessary, however, to rely on a single example. Our observations show that in more than one out of every two cases diagnostic inferences were drawn which were of definite value and use to the psychiatrist. The high degree to which the psychologist's estimate and the psychiatrist's diagnosis coincided (52% of the cases) is particularly significant in view of the adverse conditions under which this work was done. The fact that in a large proportion of the cases, the results of the comparison were poor points to the need for further refinement of technique. It must be remembered that biological laboratory procedures are by no means infallible. We are dealing here with a relatively new

procedure and a good deal of further investigation is needed. Increased accuracy will come about as scatter analysis becomes more firmly rooted in an understanding of the psychodynamics of human behavior and less dependent on characteristic sub-test relationships arrived at through empirical observation. The more we learn about *why* these relationships appear in a given clinical syndrome, the greater will be the degree to which the psychologist's estimate and the psychiatrist's diagnosis coincide.

SUMMARY

1. The Wechsler-Bellevue test was administered to a heterogeneous group of 128 patients in an overseas general hospital under rather adverse conditions.

2. The test performance and scatter of each patient was analyzed in order to determine diagnostic implications.

3. The psychologist's estimates and the psychiatrist's diagnoses were compared. In 52% of the cases, they coincided markedly. In 8% of the cases, they coincided to some degree and in 40% of the cases, they differed to a considerable degree.

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AUTO-FELLATIO

REPORT OF A CASE

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In 1938 Kahn and Lion(1) described the first case of a "self-fellator." The patient was a "cool, rather passive and egocentric young man with an outspoken tendency towards introversion and self-sufficiency, who from adolescence onward has developed numerous perverse sexual practices . . . too passive and too shy to request irrumination from other boys, the idea of self-irrumination occurred to him. This new technique first appeased his desire for self-sufficiency, and later permitted him to have a feeling of uniqueness and further delight in exhibiting himself in front of his sexual partners. From early time onward inclining toward the position of the black sheep in his over-religious family, he appears to have utilized his sexual perversion as his own method of rebelling against his family and their moral standards."

It is our purpose to present the second recorded case of self- or auto-fellatio.

The patient, a 36-year-old white staff sergeant in a non-combatant military organization stationed in this country, had been seemingly well-adjusted and productive for a period of about two years. He was admitted to the hospital, 13 September 1944, complaining that since performing self-fellatio "on an impulse" about one month previously, he had become increasingly fearful that others were aware of what he had done. Physical examination, except for the body habitus, was normal. He was a tall, slender individual with a tendency toward a gynecoid pelvis. Posture and behavior followed an effeminate pattern. The spine was markedly flexible, dispelling any doubt that he could perform the act described. He appeared rather young for his stated age; his expression was one of fear and anxiety. He was over-alert and attentive to his surroundings as though suspicious of them. He had an excellent vocabulary and was able to express himself efficiently and clearly, though the train of conversation was often interrupted by internal distractions. He described feelings of profound guilt and anxiety. He felt that since performing self-fellatio he had become so sensitive to the expressions and attitudes of others that they must either know what he had done or that he was becoming insane. He began to think that when the other soldiers used the word "cock-sucker," they were referring to him-

self. He also felt that people could tell by merely looking at his hands that he had been masturbating. He was frantic lest his mother and sister find out about his condition. He was normally oriented and seemed to be above the average intellectually. He was capable of exercising good judgment under ordinary circumstances. He was completely lacking in insight, ascribing his nervous state to the inverse act alone, and unable to recognize the true source of his guilt and anxiety.

The patient accepted reassurance well, and for a few days felt relieved to be in the hospital. The following history was obtained: His parents are of old American stock. He felt, however, that the vitality of the family must be diminishing because current generations had so few children. His parents proved to be incompatible and were divorced when the patient was 15 years old. A younger sister and the patient were raised rather strictly by the mother. He always remembers himself as sensitive and self-conscious, giving as an example his distress when his voice "changed" and he had to retire from the church choir. At about 13 he first performed self-fellatio. The incentive was an overwhelming "impulse" which he was unable to resist. Orgasm was attained. Afterwards he was frightened and did not repeat the act until one month ago. The patient had no significant associations to the act. He denied particularly that he had been feeling badly about his parents' differences. In school he felt sure of himself, academically, but inferior physically and socially. He was insecure in the company of girls. He felt a strong sexual urge and masturbated regularly. He has had no heterosexual or homosexual experiences. He felt that he was sexually abnormal and planned never to marry for fear that the condition would be inherited by his offspring. He started college with the approval of his mother but quit after about a year, explaining that he wanted to go to work. In the Army he felt that he had been a good soldier and had pride in his responsible position. However, he felt keenly his isolation from other soldiers and made numerous attempts to force himself to seek companionship. More recently he had become increasingly sensitive because of his ineffective personality and finally repeated the childhood act of self-fellatio, thus prompting his admission to the hospital.

His history was supplemented by a detailed Red Cross report, the essential features of which are as follows: The mother believed that he was "precocious" in infancy. The family physician observed that as a child, he was subject to "nervous spells and tantrums" resulting from worry about

himself. He was circumcised at 19 years because the family physician felt that "this was increasing the serviceman's nervousness." The soldier smoked excessively according to the mother but was highly averse to the drinking "he saw in another member of his own family." Mother stated that the divorce (instigated by herself) was on a friendly, mutual basis and that differences between herself and her husband did not exist when the children were small. She expressed the opinion that the husband had been an ineffectual disciplinarian as compared to herself. The patient was generally described as "intelligent, imaginative, and thoughtful but poorly adjusted socially and subject to feelings of inferiority and lacking in self-confidence." For instance, he had been urged to go to a CCC camp and then balked at the last moment, responding only to the persuasion of the family physician. The mother further spoke of his interest in flowers and pets, exhibiting a cat to which he had been closely attached for 13 years. Reference was made to his devotion to his only sibling, a younger sister; they had a common interest in collecting books and unusual articles of furniture. The patient, in addition, showed some dislike of her friends. The sister is now married. After quitting college in the second year because of "mismanagement" by a certain professor, the patient went to work in an uncle's bank. He could not tolerate the uncle's "belittling," so his sister found him a position in the factory where she was employed. He did not like the work (manual) though he remained on the job for 2 years, finally quitting at his sister's suggestion. He was then unemployed for 2 months prior to coming in the Army. Until the onset of the present illness, the mother and sister had been pleased because of his good military record.

After a few days of overtly good adaptation in the hospital, the patient was permitted the usual privilege of visiting the Red Cross building, the post exchange, and was sent to the central patients' mess hall for meals. Soon thereafter, he reported, in a distressed state, that "now they know about me in the mess hall"; he felt that he must be going insane and asked to be transferred to the "closed" ward. It was also noted that he tended to gravitate towards any group of patients as though to see if they were talking about him or perhaps to prevent such talk by his presence. It was felt that he was definitely paranoid and he was accordingly placed under "closed" ward supervision. During the next week, while preparations were made for discharge from the Army, he improved somewhat. Discussion of his personality structure and its weaknesses served to allay his anxiety and to dispel the paranoid state although he was still uncertain whether or not his family would find out about his condition. He was able to return to the "open" ward and was discharged home, 18 October 1944, with a diagnosis of psychoneurosis, narcissistic type, severe."

COMMENTARY

This case was discharged from the Army as a severe narcissistic personality because he was no longer adaptable within the military service. It was felt that his intense narcissism was the basis for a supervening schizoid trend and that unless he was returned to the protective environment of his home, the paranoid tendency already seen in a transient state, might develop into a lasting schizophrenic psychosis.

Narcissism has been manifested throughout this soldier's life. He lived closely within the family circle. He felt strongly the need for keeping himself aloof from strangers. He was sensitive and would leave jobs whenever any pressure was placed on him and would then retire within the family circle. Lacking the ability to sublimate his emotional drives, it is readily apparent why his autistic tendencies increased. At an early age, he became self-sufficient sexually through masturbation and eventually reached the acme of self-sufficiency in the act of auto-fellatio.

Sexual self-sufficiency, either by masturbation or auto-fellatio, is tantamount to having an affinity for one's own sex. Therefore the level of fixation in this individual may be considered to be a primitive form of homosexuality. The panic states which he experienced in later life, in a strictly male environment, were not unlike those of the unconscious homosexual. He had become overly sensitized to the expression "cock-sucker," which is used so frequently by enlisted military personnel. Because the patient passed the greater portion of his life in a matriarchy, following the separation of his parents, he may have developed a strong feminine identification which would account for the unconscious homosexuality. He impressed the writers as having many feminine, petulant traits. His manner of speech and certain of his gestures, plus an easy tendency to blush, were highly indicative of this trend. His rather feeble attempts to become adult and the poor success attendant upon these attempts is an indication of fixation at an early level of psychosexual development rather than a regression backwards. Development of an overwhelming conscience created

guilt-laden conflicts and helped precipitate episodes in which he became totally ineffective.

Auto-fellatio is possible only to those individuals who have the necessary physical flexibility. It is probably given consideration by many an autistic pervert, but, its execution being impossible, they either resort to masturbation or develop along homosexual lines.

CONCLUSION

1. Reference is made to the first recorded

case of self- or auto-fellatio and a second one is presented.

2. The original patient was overtly homosexual; ours had strong latent homosexual tendencies.

3. The relationship of auto-fellatio, narcissism and homosexuality is discussed.

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PERSONAL PROBLEMS RELATED TO ARMY RANK ¹

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The purpose of this study is to investigate the relations of stresses connected with positions of responsibility in the army to certain personal reactions of army personnel. An opportunity for the study of this problem was afforded by a small number of soldiers of the top four non-commissioned grades—the "sergeants"—included in a group of overseas psychiatric patients which has been previously reported(3). The vast majority of sergeants are easily able to cope with the added problems and responsibilities of their rank. It was felt that the study of a few who required special aid in making a satisfactory adjustment would be of value for several reasons.

Sergeants occupy crucial positions in the army organization. They form the links between the commissioned officers and the great body of enlisted men. They are immediately responsible for executing orders, and exercise important leadership functions. At the same time they are the channels through which the problems of the men are brought to the attention of the officers. As a group they excel the average soldier not only in intelligence, character and leadership ability, but also in the possession of special skills. They are the experts, the mechanics, cooks, gunners, clerks, on whose specialized abilities the functioning of the modern army depends. As leaders and specialists they are more difficult to replace than the average enlisted man, and their disability more seriously damages the efficiency and morale of their units. Study of certain problems connected with their position, therefore, with a view to discovering how best to meet them, would seem to be worthwhile from the standpoint of conserving valuable manpower.

In induction centers attention tends to focus on past history in the effort to exclude those apt to break down in army service. Overseas, on the other hand, where available manpower must be fully utilized and evac-

uation kept at a minimum, interest centers on the prevention and cure of psychiatric disorder through the constructive modification of immediate personal-situational relationships. These may be relatively easily observed in sergeants because they tend to be subjected to severer emotional stresses than the average soldier. By virtue of their positions they not only have heavier responsibilities but are apt to be focal points for the tensions of both other enlisted men and officers.

COMPARATIVE SURVEY

Most of the cases on which this study is based were the men of rank technician fourth grade or higher included in the group of psychiatric patients reported by Fox and Schnaper(3). These were compared with the enlisted men of the rank of corporal or lower in the same group. A few subsequent cases were added to each group for ease of comparative handling. As in the previous study, the members of the hospital detachment were used as controls.

Although there were no significant differences in types of clinical picture or incidence of certain predisposing background factors, the psychiatric disabilities of the sergeants, as contrasted with those of the other enlisted men, were much more often considered to be service connected (see Chart II). This suggests that stresses connected with army service are of more dynamic significance in producing psychiatric breakdown among sergeants than among other enlisted men.

The distribution of the different types of reaction was essentially the same in the two groups. In both, the most common reaction was anxiety or depression. Next in frequency was hypochondriacal complaining, tinged with anxiety. Resentment was overtly manifest in about the same proportion among both groups. Of the psychotic reactions, acute, brief episodes were seen with slightly greater frequency among the sergeants than

¹From the Service of Neuropsychiatry, 118th General Hospital.

among the remainder, while chronic psychotic states occurred slightly less frequently among the sergeants than among the other enlisted men. Although the frequencies of different reaction types differ slightly in the two groups, these differences are probably not significant.

Using the data of the previous study (3), the incidence of certain background factors, personality traits, and aspects of army experience was tabulated separately for hospitalized sergeants and other enlisted men, and for the sergeants and other enlisted men in the hospital detachment as controls. Chart I presents the six items which yielded the most clearcut results. These are: a high school education or better (High School);

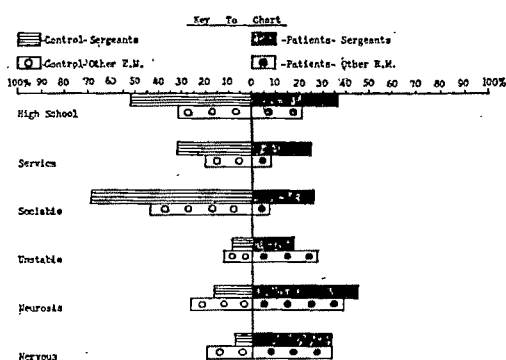


CHART I.—Relative frequencies of certain background and personality factors in hospitalized sergeants and other enlisted men compared with normal controls.

military service of three years or more (Service); estimates of the personality as sociable (Sociable), or as emotional, often with associated vasomotor instability (Unstable); a family history of neurosis or alcoholism (Neurosis); and a past history of neurotic traits (Nervous). In Chart I, frequency values for patients lie to the right of the central vertical line, those for controls to the left of the line. For each item the top rectangles represent sergeants, the bottom ones other enlisted men.

More sergeants than other enlisted men had a high school education or better. However, fewer hospitalized than control sergeants were this well educated, and the same holds for the other enlisted men. This supports the clinical impression that one factor causing sergeants to breakdown is being

given responsibilities beyond their educational equipment (see case IV below).

More sergeants than other enlisted men had served in the army three years or more. In both groups, more of the controls than patients had served so long. Apparently men who have successfully come through three years army service are somewhat better adapted to it.

As sociability is a personality attribute tending to make for promotion, it is not surprising that more sergeants than other enlisted men were rated as sociable in both hospitalized and control groups. Conversely emotional instability was slightly less often apparent in the sergeants, but here the most

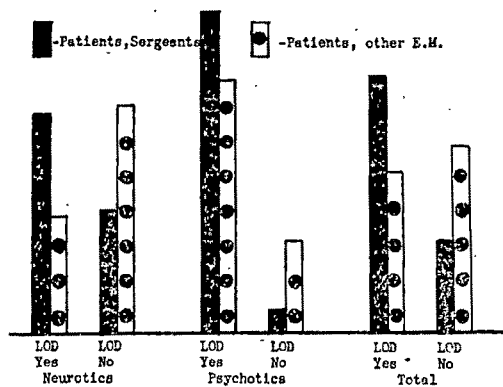


CHART II.—Percentage frequencies of line of duty status of psychiatric disabilities in hospitalized sergeants and other enlisted men.

significant difference was between hospitalized and control groups, regardless of rank.

Family history of neurosis and history of neurotic manifestations prior to induction were about equally frequent in hospitalized sergeants and other enlisted men, but significantly less in the corresponding controls² (cf. 7).

In Chart II the psychiatric disabilities of the sergeants and other enlisted men are classified in accordance with whether they were considered to have been incurred in

² In the control group, only a small number of the sergeants had a past history of neurotic manifestations, compared with a significantly larger number of the other enlisted men, suggesting that adequately adjusted sergeants may tend to be more stable than other enlisted men even though psychiatrically disabled ones are not.

line of duty (LOD Yes), or as existing before induction (LOD No). Patients whose disabilities were considered to be caused by their own misconduct were also classed as line of duty "No." It will be seen that a large proportion of the sergeants' disabilities, contrasted with a much smaller number of those of the other enlisted men, were classed as line of duty "Yes." The marked preponderance of service-connected disabilities among the sergeants holds true for both neurotic and psychotic patients considered separately.³ This fact, in conjunction with the same frequency of certain predisposing background factors in the two groups, bears out the supposition of the greater relative dynamic importance of current situational factors among sergeants.

CLINICAL DISCUSSION

The upper four non-commissioned grades are positions of special advantages as well as special vulnerabilities, arising from the fact that sergeants are enlisted men who carry out some of the functions of officers. With respect to the other enlisted men they tend to be foci of resentment as the "immediate agents of discomfort" (4), actual executants of what may be a resented order. Resentment may take the form of accusations of favoritism, of scorn because of supposed servility to officers, and so on. In addition, sergeants are objects of envy from those who covet their positions. The fact that they too are enlisted men not only increases their exposure to hostility from the others but lessens their protection against it. They lack the buffer afforded by the social distance a commission confers. Finally because of their special abilities or responsibilities, they are apt to be called on for a greater expenditure of effort than the average soldier, especially at certain times.

Certain important stabilizing influences counteract these insecurities. Sergeancies

³ Only two of the psychotic reactions among sergeants were classed as having been present before induction (LOD No) which is to be expected, since a man manifesting psychotic trends from the time of induction would be unlikely to be made a sergeant. One of the cases was a parietic whose illness first became manifest some time after induction, the other, a cook with a simple schizophrenic reaction.

carry not only a financial reward, but prestige, as positions of responsibility, leadership and recognition of special skills. Sergeants have the ego-strengthening knowledge that they occupy key-positions. Non-commissioned officers clubs give them the support springing from group solidarity, as well as protecting them to some extent from the pressures outlined above.

For almost all sergeants, the assets of the position more than counterbalance the disturbing elements, enabling them to function securely and effectively. Psychiatric casualties appear to occur characteristically among a small group, often of superior intellectual and characterological endowment, who have come to rely too heavily on achievement and approbation to allay a sense of personal insecurity. Anything which threatens their ability to meet successfully the demands of their position may result in an emotional disturbance. For example, certain men who have regarded bodily vigor as the main instrument of their success may react excessively to physical disability, as in the following cases (*cf.* I, p. 134):

CASE I.—This 24-year-old intelligent, well built negro staff sergeant, a horse trainer in a mounted unit, was admitted from furlough complaining of vomiting and headache. He stated that he had been in vigorous health until he was trampled by a horse about two and one-half months previously. Three days afterwards he developed hematoma and a pain in the left flank, for which he was hospitalized about 6 weeks. His symptoms persisted and he was unable to work. Finally his Commanding Officer suggested that he take a furlough. The patient took this to mean that his usefulness to the unit was over and that he would probably be discharged from the army. As he put it "when I accepted the leave I thought probably I would be dismissed." His vomiting and lower abdominal pains started en route to the leave area.

The patient's mother is described as highly nervous. The father had been a semi-invalid for 25 years following a hip injury. The patient described himself as hot-tempered in childhood, but other neuropathic traits were denied. He was a purposeful, highly ambitious individual whose life was characterized by continuous achievement. He contributed to his family's support from an early age. He helped earn his way through high school by selling papers, and through college by athletic ability. At the time of induction he was in process of earning enough money to take graduate courses in library and social work. His wife was a college graduate and social worker. His army record had been without blemish.

In hospital he showed excessive concern about his condition, with tearfulness, agitation, and worry about its effect on his future. He slept poorly and complained of dizziness and headaches. He exaggerated his complaints and had dramatic attacks of lower abdominal tearing pain which appeared to be hysterical in nature. Careful review of his physical status revealed no cause for his complaints, nor was there any evidence of residual renal injury.

CASE II.—This 24-year-old white chemical warfare sergeant in a bomber group appeared on admission to be completely disabled by sciatic pain in the left leg. He was bedridden, failed to respond to treatment, showed emotional disturbances, and seemed to be exaggerating his pain and disability, so was transferred from the orthopedic to the psychiatric service. There were definite but slight physical signs of sciatica.

His father for years had used "foot trouble" as the reason for being a poor provider, and his mother frequently had to work. She at one time had a "nervous breakdown." The patient was powerfully built but short and felt physically inferior to his larger, younger brother. From childhood he was restless, overactive and aggressive. He had an excessive drive to achieve financial independence, working nights while he went to school, and later taking both day and night jobs which he changed frequently. At 20 he suffered a "breakdown," cured by working in an institution where his mother was a matron. He finally settled on tree surgery as a career. He was engaged to a girl of superior educational level to his.

Shortly after induction into the army he injured his back on the obstacle course, but had no further difficulty until about six months before admission when he awoke one morning with severe back and leg pain. Shortly before this he had been transferred to a new squadron and promoted to sergeant. He was repeatedly hospitalized without permanent relief, relapses usually being brought on by violent exercise.

In hospital he gradually unfolded his resentment because he felt so little had been done for him, and because of the implied accusation that he was "gold-bricking"; his dissatisfaction with his new assignment because the new organization appeared less interested in his subject than the old one, and his worry about the effect of his disability on his career. As his attitude gradually changed from aggressive defensiveness to relaxed confidence, he became able to walk without support and with only a slight limp, and the mood disturbances largely subsided.

The fathers of both these patients had been physical invalids and poor providers. This probably helped to produce in the sons a contempt for physical weakness, an overemphasis on bodily strength as a prerequisite of success, and a determination to be better earners than their fathers were. It probably also heightened their sensitivity to the imputation of malingering.

Both men were emotionally related to women of superior education, increasing their feelings of insecurity. In both there was a functional elaboration of the disability, partly a direct expression of emotional disturbance, partly an effort to refute the implied charge of malingering.

Case I was the financial mainstay of his family. His success was partly due to his abundant energy and strength. There are hints of over-ambitiousness and emotional instability, but his life was an unbroken triumphal march until his accident. This threat to his health mobilized all his underlying anxiety. His use of the word "dismissed" sums up the loss of status which he felt had resulted from his disability.

Case II felt physically inferior to his younger brother. After a period of frantic, restless money earning he settled on a career of tree surgery, which required considerable agility and strength. His disability threatened his prospects of continuing with this work. An added source of insecurity was the relative disinterest of his new organization in his special field of chemical warfare, resulting in a loss of approbation similar to that occurring when men are misclassified (see case V below). The coincidence of the flare-up of symptoms with his promotion is probably fortuitous in this man, who appeared to welcome responsibility.

The records contain two other similar cases, both negroes. The apparent greater frequency of this reaction among negroes may be related to their greater dependence on physical labor as a means of gaining economic and personal security.

These cases illustrate the importance of distinguishing functional elaboration of organic disability from malingering. Men who have functioned successfully for some time as sergeants are *a priori* unlikely to malingere, because this behaviour is inconsistent with the personality attributes which made them good sergeants. In such men even the faintly implied accusation of malingering complicates the therapeutic problem. It arouses hostility, blocking the rapport necessary for treatment. It increases the symptoms by intensifying the underlying anxiety, and causes the patient to cling to them all the more firmly to demonstrate that he is really ill.

Excessive reliance on good performance to allay anxiety may reveal itself in overconscientiousness. Driven by chronic anxiety certain men work exceptionally hard, especially when the demand for work is limitless and they are under pressure from above. The fatigue produced by excessive effort may result in reduced efficiency, leading to a threat of demotion and increased anxiety, a typical vicious circle. The eventual breakdown is then attributed to "overwork." Undoubtedly exhaustion in itself lowers the threshold for emotional disturbances (6). With one or two possible exceptions in our series, however, the overwork was itself a manifestation of the constellation of personal vulnerabilities and situational stresses which brought about the collapse.

Attempts to restrain such men from exhausting themselves by working too long hours would be justified by the consideration that their total output would be greater if their immediate output were less. However such efforts would fail, and might even increase the anxiety in the face of the unfinished task, unless the insecurity underlying the drive to work were recognized and successfully met by, for example, generous approval for the work already completed.

CASE III.—This dapper, superficially self-assured 26-year-old technical sergeant was admitted at the end of his furlough, complaining of "sleeping sickness," characterized by repeatedly dropping off to sleep at work, tremulousness and epigastric distress. He was physically normal, and there were no findings suggestive of narcolepsy.

His mother died when he was 4, and he and his younger brother were raised in an orphanage until he was 13. He was never on good terms with his father who drank heavily, and whom he describes as stubborn. Despite having to work from the age of 13 he achieved the equivalent of a second year high school education by 17. His civilian career was characterized by purposive self-improvement, and a progression to increasingly well-paid white collar jobs. He stinted himself to put his brother through college, and persuaded him to take ROTC so that he now had a chance to be an officer. He had always been hard-working and meticulous, with a heavy sense of responsibility.

During basic training he studied accounting at night school, to which he attributed obtaining a position in the subsistence commissary of the quartermaster corps. Immediately after coming overseas he volunteered to go into the interior with an officer and open up a trucking route. He stated he was the only volunteer. He worked 14 hours a day and felt that the help given him was inadequate.

In this setting his attacks of sleepiness began. At the close of the mission he was recommended for Warrant Officer, but no opening was available. He then worked at a base section until he was transferred to a tropical island, he believes because his superiors suspected that his persistent sleepiness was due to carousing at night. He had to do hard physical work at first there, and developed poor appetite and epigastric distress. His sleepiness continued and he was soon transferred to a less responsible position on the ground that his work, though very well done, was too slow. This alarmed him: "When they start transferring a technical sergeant from here to there he's definitely no good. I've been kind of worried about what they were going to do to me." At this time tremulousness and weakness first appeared.

In hospital he was given an opportunity to express his dissatisfactions and fears. He implied, rather than actually expressed, resentment at having been given extra work and at not having had sufficient assistance. His attitude appeared to be one of hurt bewilderment that such an excellent worker as himself should be so shabbily treated. He took great pride in his training: "I feel I know my job as a technical sergeant should." Benzedrine was given as a subsidiary therapeutic measure. His nervousness and sleepiness gradually diminished and he was sent to a replacement center for reclassification.

This patient's love-starved childhood created in him a strong need for affection and approval, which he satisfied by becoming a model citizen, gaining approbation by hard work and good deeds. A special source of security was his attempt to make himself indispensable to his younger brother and hold his love by constant help and guidance. This succeeded so well that the brother has excelled him. His satisfaction at this must have been tempered with anxiety at the realization that the brother no longer needed him. In the army he continued to strive successfully for approval, taking on all the work offered to him and being the only volunteer for an arduous assignment. His reward for this was in his eyes, to be overworked and given insufficient help. His sleepiness, which first appeared in this setting, probably represented both an attempt to escape from this disagreeable situation and a form of sulking at being, as he felt, both exploited and neglected. This feeling was intensified by failure to receive an expected promotion. The resulting increase of symptoms reduced his efficiency so far that he was transferred to a less desirable job. He stressed the hard physical labor involved, as if this were a

further sign of coldness and lack of appreciation from his superiors. His symptoms became acute when a second transfer to a less responsible position raised the threat of demotion, making it clear that he had definitely lost the approval he had always relied on to allay his anxieties.

In some insecure men, with a limited education and often from a rural environment, personal stability may be threatened by promotion. They feel inadequate to the new assignment and become anxious and depressed. This reaction seems identical with the "promotion depression" of civilian life (2). Positions of leadership are especially apt to produce this reaction, possibly because of the potential exposure to hostility which goes with them. The following case is illustrative:

CASE IV.—This 25-year-old sergeant in the engineers was admitted complaining aggressively of pains in the ears, dull burning in the head, and generalized muscular stiffness. In addition he complained of unreality feelings, loss of initiative, poor sleep, poor memory and concentration, poor appetite, constipation and weight loss. He said, "I don't want any responsibility."

He was brought up in a rural area, and was sickly until the age of 16. He reached only the sixth grade, stopping because of the necessity of earning his living. He worked as a carpenter, living at home, until enlistment.

Shortly after arrival on a tropical island he had three attacks of fever, two of which were identified as malaria. He made a good recovery and worked hard on construction work. A few months before admission a slight injury to his right shoulder necessitated his giving up baseball, his favorite pastime. Somewhat later he learned that his fiancée had married someone else. His head and ear symptoms began at about this time. Soon thereafter his organization returned to the mainland and he was promoted from technician fifth grade to sergeant and placed in charge of some men who were strangers to him. He felt that he should have been made technician fourth grade, which carried the same pay but without the command responsibilities, for which he regarded his education as insufficient. He stated that the "men would not take orders" and that his commanding officer was "cranky." Under these circumstances his bodily symptoms rapidly increased. The possibility that they were due to a recurrence of malaria was ruled out by their failure to respond to intensive anti-malarial therapy. During a nine weeks' hospital stay his condition showed no significant change.

This man came from a rural background and had received only a limited education. He had satisfactorily withstood the rigors

of the tropics. His vulnerability had been increased by a shoulder injury, depriving him of his favorite form of recreation, and by a personal misfortune. His promotion, given as a reward for good work, to a position requiring leadership over strangers, put him in a situation to which he felt totally inadequate and caused a marked increase in symptoms.

This case illustrates that good working habits and docility need not be synonymous with leadership ability. Men whose good performance is motivated by a constant need for approval may perform excellently in subordinate positions, yet be overwhelmed by anxiety when promoted.

The case material also includes a man who developed incapacitating "stomach trouble" on promotion, leading him to do so poorly that he was demoted for inefficiency. He recovered rapidly, only to relapse two years later when he was again promoted.

Certain men experience a severe threat to their ego if not permitted to utilize the special skill by means of which they had achieved status in civilian life (*cf.* 5, p. 266). Being placed at work for which they are not trained gives them the feeling of having lost caste, and also exposes them to unaccustomed criticism for poor performance. This can be disastrous in persons whose self-respect is deeply involved in their work, and who lack sufficient plasticity to adjust to new activities:

CASE V.—This 48-year-old sergeant was admitted complaining of paresthesias and a sense of distension of both lower extremities. He was tearful, tremulous, and appeared depressed and discouraged. Physical examination demonstrated no organic disease.

Both his parents died of arteriosclerosis. He completed two years of college, then served five years in the Navy. For fifteen years before enlistment he was a physiotherapist in a leading state mental hospital.

He stated that he enlisted on the basis of verbal assurances that he would be used as a physiotherapist, being partly motivated by a desire not to lag behind his brother, a captain in the marine corps, and his son-in-law, an army sergeant. He was made a supply sergeant in a combat outfit and took part in two battles and five landings in the tropics. He strongly disliked his job, and was subjected to what he felt was unwarranted criticism. His symptoms appeared when, in addition to his other trials, he developed sores on his feet. He eventually achieved transfer to a general hospital

in the hope of being permitted to do physiotherapy. Unfortunately no such work was available at the time and he was assigned to odd jobs. He became increasingly despondent, obtained a furlough, and turned in to this hospital.

Here he was put to work as physiotherapist in the neuropsychiatric section and was allowed to demonstrate that he could make a valuable contribution. He cooperated enthusiastically and his complaints became insignificant. He was so eager to continue at his work that he accepted transfer to this organization although it meant being reduced to private. For several months he did excellent work, but then the issue of rank reasserted itself. He became increasingly dissatisfied because he did not promptly regain his sergeantcy, and finally asked to be transferred to another type of job. His emotional disturbances and bodily complaints, however, did not recur.

This man had made an apparently successful civilian adjustment on the basis of the recognition accorded to his occupation. Except for a hint of overconcern about his health resulting from his parents' illness, there is no evidence of previous anxiety. Exposure to the tropics, combat experiences, and a dermatitis with its chronic nervous drain prepared the ground for his breakdown. However, the chief cause appeared to be being placed in occupations for which he did not feel fitted and which involved a marked loss of status, emphasized by what he felt to be unjustified criticism of his performance. His resentment was heightened by the disappointment of his expectation on enlisting that he would be used as a physiotherapist. His rigidity, probably partly due to his age, prevented successful adjustment to those conditions, and he developed incapacitating anxiety and depression. He willingly accepted reduction to the rank of private in order to get back to his specialty, with marked improvement in his symptoms, although he could not for long comfortably accept a reduced rank.

A similar example of difficulties from inability to use special skills is that of a 31-year-old staff sergeant who had applied for a direct commission as an expert on carrier pigeons. He was told that he would have to serve as an enlisted man for three months, so he enlisted as a radar expert. As the months rolled by and no opportunity to do either radar or pigeon work appeared, he became increasingly dissatisfied and resentful, until after eleven months he required hospitalization, with a flare-up of old com-

plaints of nervousness and gastro-intestinal difficulties.

The common denominator in most of the cases presented above is a threat to the ego in insecure men who have relied too heavily on external achievement to support their self-respect and allay their anxieties. These men, often very successful in civilian life, may withstand poorly the special stresses of the position of sergeant, which, in the series here presented, are chiefly forms of the threat of failure. Among the many guises in which this may appear are physical disability in men who have attributed their success primarily to physical vigor, promotion to positions for which the person feels himself inadequate, and being assigned to work in which accustomed skills cannot be used.

From these cases it would appear that efforts to utilize special skills discriminately and to grant sufficient recognition and approval are well justified, because of their value in counteracting feelings of personal insecurity which facilitate psychiatric breakdown in certain sergeants.

SUMMARY

1. A group of non-commissioned officers of rank technician fourth grade or higher hospitalized for psychiatric disorder, compared to a group of controls of similar rank, showed a greater frequency of family history of neurosis and neurotic manifestations prior to service, slightly less length of service, a lower educational level, and were rated less frequently as sociable and more frequently as unstable.

2. Sergeants with psychiatric disorders differed from other enlisted men with similar conditions in having a higher educational level, greater length of service, more frequent ratings as sociable and less as unstable. The two groups did not differ significantly in frequency of family history of neurosis or previous neurotic manifestations.

3. The majority of both neurotic and psychotic casualties among sergeants were considered to have been incurred in line of duty, and the proportion of service-connected psychiatric disability was greater for sergeants than other enlisted men. This suggests that situational factors, as contrasted with historical ones, were more important causes of psychiatric disability in sergeants than other enlisted men.

4. An outstanding cause of emotional disturbance in sergeants was the fear of failure in men who had been over-dependent on success and approval to allay anxiety.

5. Threats to personal security included:

a. Physical disability in men who overvalued their bodies as means to success.

b. Loss of approval, often with threat of demotion.

c. Promotion to leadership positions of men who felt inadequate to this responsibility.

d. Assignment of specialists to work for which they are not trained.

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THE PSYCHOPATHIC PERSONALITY

THE RORSCHACH PATTERNS OF 28 CASES

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INTRODUCTION

The Rorschach pattern of the psychopathic personality continues to be a challenge to modern medicine and psychiatry. It is a problem for physicians and psychiatrists to evaluate the psychosocially maladjusted states which belong to the large heterogeneous group of individuals known as psychopathic personalities.

The backgrounds of the average psychopaths, in this series at least, appeared to be more constant than even in the case of the psychoneurotic and psychotic patients, *i.e.*, such factors as broken homes, nomadism, truancy, "lone-wolf" behavior, an early dislike for the world in general, early continued use of alcohol or drugs, legal difficulties with arrests and disorderly conduct, an utter disregard of the feelings of others, and lifelong history of periods of marked emotional lability and impulsivity, with the typical "I'm so sorry" attitude following misbehavior, enabling them to gain more liberties and freedom for repeated bouts of anti-social conduct.

The present study is based on a survey of soldiers received from forward echelons to a general hospital in the South Pacific Area.

PURPOSE

The aim was to correlate clinical and Rorschach findings to determine any demonstrable components of the total personality of the so-called psychopath that would be of diagnostic and clinical significance. What is the inner personality structure of the person who constantly fights the forces of civilization? Why does the psychopath allow his primitive urges and drives to travel freely in complete disregard of social and moral laws and customs, with an apparent flimsy conscience that consists of but a feeble precipitate of all the prohibitions and inhibitions, the rules of conduct, and the respect and feelings of others? The intent was to attempt to find any constant Rorschach factors that could be correlated with personality ele-

ments as evidenced by clinical and military behavior.

CONDITIONS

It is felt that standard experimental conditions such as those provided in a general hospital in the South Pacific Area, would be difficult to duplicate in civilian life. The soldiers have been indoctrinated to military life and routine. The hospital day was fairly constant as to their common activities. All the patients arise at the same time, eat the same breakfast, were exposed to the same ward personnel, saw the same picture shows and in general fell into the rather drab routine existence of overseas garrison life. The fluctuating milieu and shifting conditions of stress and strain as encountered in every day civilian life were not present in this series due to a more or less controlled military environment. This every day "sameness" of living is hard for the civilian, who has not experienced army life, to comprehend. Its significance may of course be open to question.

The soldier was allowed one week to become acclimated to the hospital and ward routine. Repeated interviews eliminated the psychopaths with depressive, psychoneurotic or psychotic coloring. Psychometric tests were not done on all cases. Soldiers evidencing borderline intellectual capacities or below were eliminated by the Wechsler-Bellevue test. This was done in an attempt to rule out any extraneous factors.

Each soldier was in good health, well nourished and rested, and not suffering from any medical or surgical disability. Routine admission, complete urinalyses and blood studies were within normal physiologic limits. In an attempt to improve rapport and lessen insecurity on the part of the patient, the examiner explained that the procedure (Rorschach) was irrelevant as far as the military status of the soldier was concerned, being purely a matter of scientific interest and research.

CLINICAL MATERIAL

A thorough clinical examination of each soldier was made including the following: complaint and present illness, personal history, personality traits, family history, mental status, complete physical and neurological examinations, including examination of the fundi oculorum and any other contributory examinations that were indicated such as X-ray, B.M.R., blood serology and chemistry, spinal tap, etc.

Of the 28 soldiers that fell into the group called psychopaths according to army classification, 5 were psychopathic personalities with criminalism, 4 were sexual psychopaths, 2 were classed as paranoid personalities. And the remaining 17 were inadequate personalities.

The average age was 25; the youngest 20 and the oldest 36. This is a comparatively young over-all age incidence. The average length of military service was 17 months with variations from 8 months to 8 years. The average time spent in an overseas theatre was 7 months, shortest 10 days and the longest 28 months.

The Rorschach was accepted by 25 of the 28 cases and was rejected by one sexual psychopath, one hardened criminal and one inadequate personality. This was felt to be of clinical importance since such behavior is frequently seen in psychotics or patients evidencing marked personal insecurity. Clinical abstracts of each case have been compiled and attached to each respective Rorschach. A brief summary of a case falling into each subdivision follows:

CASE 6.—C. P. S., inadequate personality. A 24-year-old private with 20 months service and 3½ months in the South Pacific Area. Complaints on admission: "I just can't stand any excitement; get excited easily and blow my top at everybody. I go into a rage against the slightest things—I know better—am sorry afterward, but I just lose control."

Past history revealed birth and early development normal. Parents were show people and traveled in carnivals and small circuses. His childhood ambition was to become a showman. Started school at the age of 6 and completed 3 years of high school at the age of 16. "I just got tired of it." His mother evidenced a marked neurotic personality. He was reared by his grandparents with strong attachment and lack of discipline. "I always had my own way." Morbid

fears of darkness and storms were the only neuro-pathic traits elicited. Eldest of two offspring. Sister rejected from Cadet Nurse Corps because of "nervousness." He began drinking at the age of 14 with several-day sprees and alcoholic excesses. He denied any episodes of delirium tremens or alcoholic hallucinosis. He married at age of 18 a high school sweetheart with considerable family conflict over his alcoholic bouts. The union resulted in one offspring living and well. He was arrested for vagrancy at the age of 15 and had over 8 civilian arrests for drunk and disorderly conduct and gambling. His occupation prior to induction was that of running gambling concessions in small carnivals. He averaged well over \$50 a week, including expenses.

He was rejected from the military service on three separate occasions and finally joined as the result of an emotional upset with a friend who had a son in the service and "dared him to join."

He admitted his military record was fortunate inasmuch as he had avoided formal courts martial. He lost a Tec 5 rating for "telling off" an officer. His conduct had resulted in many company punishments. Several line officers had recommended courts martial on numerous occasions. He was evaluated as a rash, disrespectful person by the entire ward personnel.

Complete mental examination was within normal limits. Physical examination was negative except for compound myopic astigmatism. Laboratory and neurological examinations were non-contributory.

CASE 2.—C. P. S., inadequate personality with criminalism. 29-year-old private with 10 months service and 4½ months overseas in the South Pacific Area. Complaint on admission: "Same pain in the stomach—don't like to be complaining, but I'm no better I guess." The soldier was obviously groping for some type of subjective symptomatology and unable to do so with ease.

Past history revealed birth and early development normal. Second of 7 children. "I didn't get along with anybody; we were always fighting." Started school at age of 8 and completed the 6th grade at 14 with history of truancy and nomadism. Began moderate alcoholic excesses at age of 14. Denied any neuropathic traits.

His criminal career started at the age of 16 with bootlegging, automobile theft, gambling and various rackets. At 19 he was arrested for armed robbery and spent 7 years in the Eastern State Prison. He was again arrested for violation of the Byer Act, but sufficient legal evidence was lacking for another conviction.

Numerous attempts at duty trials and rehabilitation to no avail in this theatre.

Mental and physical examination and laboratory data were non-contributory.

CASE 3.—C. P. S., sexual psychopathy. 24-year-old private with 24 months service and 22 months in South Pacific Area. Complaint on Admission: "I am a homosexual and with 2 years in the Army it has been torture and I can't stand it any longer."

Past history revealed his father deserted his mother soon after the patient's birth. Mother was "high-strung" and remarried six times. He was the only child, with close maternal attachment and over-protection. He completed one year of high school at age of 14 and quit to attend beauty school. Denied any neuropathic traits.

At the age of 7 patient practiced fellatio on a 20-year-old youth who asked him to do so. He became the member of a homosexual circle at the age of 17 and was the passive partner, dressing at times as a woman even to the undergarments.

His initial heterosexual relationship took place at age of 17 at the demand of his mother who learned of his homosexuality. He visited a brothel "to find out whether it would change me any, although I knew it wouldn't." Experienced normal intercourse and ejaculation, but with no pleasure.

He admitted multiple homosexual episodes in the service. His appearance was effeminate with female gait and the constant use of strongly scented toilet water.

Mental status, physical and laboratory examinations were essentially negative.

It was clearly recognized that the criminals, sexual psychopaths and the two paranoid personalities were distinct and separate cases as opposed to the inadequate personality per se with no marked criminal, sexual or paranoid coloring of a sufficient degree to justify a definite diagnosis. However, since modern nosology tends to group them together, they were included in the total Rorschach picture and then later subdivided to find any typical differences.

Rorschach workers agree that one cannot develop a typical diagnostic Rorschach pattern for each psychiatric classification, yet it is well agreed that certain components are inclined to occur frequently enough to be of possible significance in certain illnesses, e.g. the prevalence of "color shock" in hysterical reactions.

The total and over-all Rorschach must be carefully analyzed and interpreted as a whole. In our series the Rorschach results as to the quantitative distribution of the various scoring categories were treated by a simple averaging of all the tests. This is of value but the qualitative characteristics of the responses are of equal significance as correlated with clinical behavior.

On a basis of the total average, then for the entire group, the Rorschach pattern, as shown on page 108, was obtained.

Inasmuch as this includes the total group, the data on page 109 represent only the inadequate personality, not including the

criminals, sexual psychopaths and paranoid personalities.

RORSCHACH DATA

The relative constancy of the relationship among factors is easily observed, and the major difference appears to be in the weight of FM which is easily explainable when one considers the sexual psychopaths in the total series.

On the basis of 28 cases it is felt that the following factors are of value in the Rorschach picture of the psychopath.

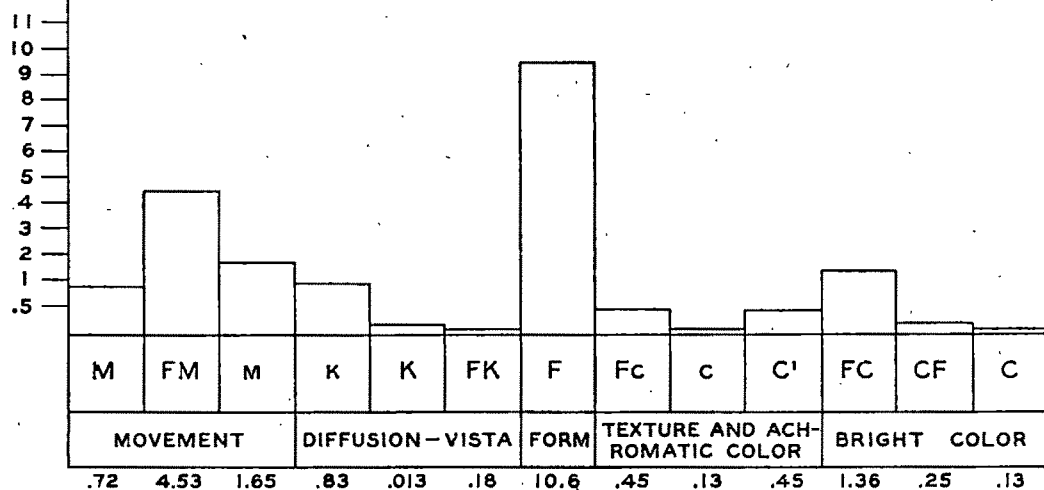
1. Number of responses around 20.
2. Reaction time for non-color cards is about the same as for the color cards.
3. Total F around 55%.
4. Original responses are absent.
5. $(H+A) : (Hd+Ad)$ is constantly 2:1.
6. $M : \text{Sum } C$ is about 1:2½.
7. $(FM+m) : (Fc+c+C')$ is weighed on $(FM+m)$ side due to sexual responses.
8. Responses to cards VIII, IX, X around 38%.
9. $W:M$ around 5:1.
10. $D\%$ is usually greater than 60%.
11. The psychopath rarely refuses a card.
12. $A\%$ is usually less than 50% (vs neurotics).
13. There is an apparent poverty of inner and outer control with around 11 or more F responses.

The quality of F responses is very poor and non-committal with little patience or interest and "a get it over with as quickly as possible" attitude. Klopfer and Kelly ("The Rorschach Technique"), state "that a lack of D especially 1/3rd of R indicates a lack of recognition of the problems of everyday life, and that an over-emphasis on D as a rule indicates that person employs common sense as a mental basis for his mental activity."

A D percentage of greater than 60% is not an obvious over-emphasis on D, yet one would expect the D percent to be weighted in the other direction, if these authors' concept is correct, this would appear to be open to further investigation.

FORM 29-65

NUMBER OF RESPONSES MASTER SHEET -- TOTAL 28 CASES



RELATIONSHIPS AMONG FACTORS

Total responses (R) = 20.8

Total time (T) = 14.5 min.

Average time per response $\left(\frac{T}{R}\right) = .7$ min.

Average reaction time for cards I, IV, V, VI, VII = 24

Average reaction time for cards II, III, VIII, IX, X = 26

 $\frac{\text{Total F}}{R} = 52 \text{ F\%}$ $\frac{FK + F + Fc}{R} = 55\%$ $\frac{A + Ad}{R} = 51 \text{ A\%}$

Number of P = 3

Number of O = 0

*(H + A) : (Hd + Ad) = 8.1 : 4.3

 $\text{Sum C} = \frac{FC + 2CF + 3C}{2} = 3.1$

M : sum C = .72 : 3.1

(FM + m) : (Fc + c + C')* = 6 : 1.29

No. of responses to cards

 $\frac{\text{VIII, IX, X}}{R} = 37.5\%$

W : M = 5.5 : .59

Succession:

Rigid	Orderly	Loose	Confused
	X		

(Place a check mark at the appropriate point on the scale above)

ESTIMATE OF INTELLECTUAL LEVEL

Intell. Capacity	Intell. Efficiency
....Very superior	....Very superior
....Superior	....Superior
....High average	....High average
X Average	X Average
....Low average	....Low average
....Dull normal	....Dull normal
....Feeble-minded	....Feeble-minded

Note that this estimate is based mainly on the following:

number and quality of W
number and quality of M
level of form accuracy
number and quality of O
variety of content
succession

MANNER OF APPROACH

W(31%) D(62%) d(9%) Dd and or S(1.5%)

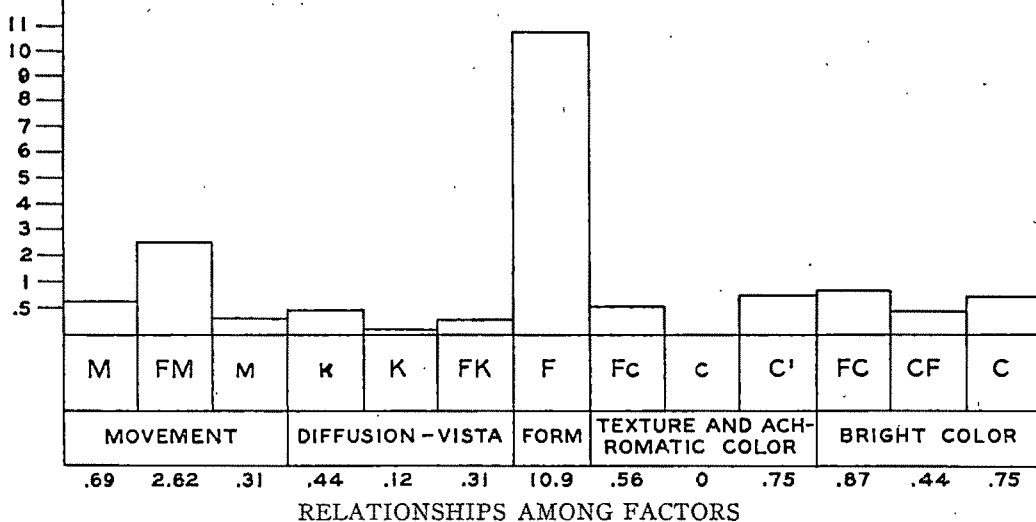
Enter the location percentages of the spaces above. Compare these percentages with the norms shown in the box below, by placing a check mark opposite the appropriate range of percentages.

W	D	d	Dd and or S
<10% ((W))	30% ((D))		1.5%
10-20 (W)	30-45 (D)	5% (d)	
20-30 W	45-55 D	5-15 d	10% DdS
30-45 W	55-65 D	15-25 d	10-15 DdS
45-60 W	65-80 D	25-35 d	15-20 DdS
>60 W	80 D	35-45 d	20-25 DdS
		45 d	25 DdS

FORM 29-65

NUMBER OF RESPONSES

MASTER SHEET -- INADEQUATE PERSONALITY ONLY



Total responses (R) = 18.2

Total time (T) = 19 min.

Average time per response $\left(\frac{T}{R}\right) = 1.04$ min.

Average reaction time for cards I, IV, V, VI, VII = 35.1

Average reaction time for cards II, III, VIII, IX, X = 32.5

 $\frac{\text{Total F}}{R} = 57.8\%$ $\frac{FK + F + Fc}{R} = 61.4\%$ $\frac{A + Ad}{R} = 45\%$

Number of P = 4

Number of O = 0

*(H + A) : (Hd + Ad) = 6.75 : 3.56

 $\text{Sum C} = \frac{FC + 2CF + 3C}{2} = 2.13$

M : sum C = .8 : 2.13

(FM + m) : (Fc + c + C')* = 2.75 : 1.44

No. of responses to cards

VIII, IX, X
 $\frac{\text{No. of responses}}{R} = 37.1\%$

W : M = 4.8 : .75

Succession:

		X		
Rigid	Orderly	Loose	Confused	

(Place a check mark at the appropriate point on the scale above)

ESTIMATE OF INTELLECTUAL LEVEL

Intell. Capacity

....Very superior

....Superior

....High average

X Average

....Low average

....Dull normal

....Feeble-minded

Intell. Efficiency

....Very superior

....Superior

....High average

X Average

....Low average

....Dull normal

....Feeble-minded

Note that this estimate is based mainly on the following:

number and quality of W
number and quality of M
level of form accuracy
number and quality of O
variety of content
succession

MANNER OF APPROACH

W(28.75%) D(63.0%) d(6.1%) Dd and S(2%)

Enter the location percentages of the spaces above. Compare these percentages with the norms shown in the box below, by placing a check mark opposite the appropriate range of percentages.

W	D	d	Dd and S
<10% ((W))	30% ((D))		
10-20 (W)	30-45 (D)	5% (d)	2%
20-30 W	45-55 D	5-15 d	10% DdS
30-45 W	55-65 D	15-25 d	10-15 DdS
45-60 W	65-80 D	25-35 d	15-20 DdS
>60 W	80 D	35-45 d	20-25 DdS
		45 d	25 DdS

In order to present the data obtained from each patient in a composite manner and so that the variations in answers are evident, the following charts are given in order for the scatter to be seen.

The succession throughout was fairly orderly. Careful analysis of the content, inquiry, and testing the limits failed to produce any important or constant findings that have not previously been mentioned.

havior. The psychopath lacks adequate intellectual depth to personally understand his behavior, yet his intelligence is within normal limits as measured by clinical and psychometric appraisal. The cognitive subdivision of his personality seems rather to be ruled by primitive basic instinctual and sexual drives to the exclusion of rational behavior. There is no apparent inter-personal conflict over this apparent deviation in his integra-

INADEQUATE PERSONALITY

Case no.	BAR GRAPH DATA												
	M	FM	m	k	K	FK	F	Fc	c	C ¹	FC	CF	C
1	0	1	0	0	0	1	16	0	0	0	0	1	0
2	1	3	0	0	0	0	14	0	0	0	0	0	0
3	1	1	0	0	0	0	14	3	0	2	0	0	2
4	0	2	1	0	0	0	15	0	0	0	0	0	0
5	0	1	1	0	0	1	14	1	0	1	0	1	0
6	0	2	0	1	0	0	12	0	0	1	1	0	0
7	2	2	2	0	0	0	11	0	0	1	1	0	1
8	0	2	0	1	0	0	6	0	0	0	1	1	3
9	1	7	1	0	0	0	12	0	0	0	0	0	0
10	0	0	0	2	0	0	7	1	0	1	2	1	0
11	0	2	0	1	0	1	3	1	0	0	3	1	0
12	1	2	0	0	1	0	16	0	0	1	3	2	0
13	1	4	0	0	0	0	5	0	0	0	0	0	0
14	1	9	0	1	0	0	4	1	0	0	3	0	1
15	3	2	0	0	0	0	16	1	0	0	0	0	0
16	0	2	0	1	0	0	5	1	0	5	0	0	5
17	Reject												

SUMMARY AND CONCLUSIONS

Clinical and Rorschach studies were made on 28 soldiers evidencing a psychopathic personality. The Rorschach scatter for each of these cases is given. Three brief clinical histories are included. The total Rorschach average is given and the criminals, sexual psychopaths and paranoid personalities subtracted from this total with the Rorschach pattern of the inadequate personality given.

Certain relatively constant factors have been mentioned. It is felt that such a series under such a controlled atmosphere as produced by the military service in an overseas theatre would be difficult to duplicate in civilian life. This is a limited number of cases.

The psychopathic personality appears to be shallow, flat and lacking in sufficient inner and outer control to warrant normal be-

havior and he continues blithely along his way, bumping his head into the stone walls of social mores and customs time and again.

Emotionally he is vacant with little innate emotional control and that present, when aroused, is characterized by violent upheavals and uncontrollable behavior of the rage reaction type which, at the time of the outburst, is of psychotic nature and appears to mimic insanity even in the legal sense of the word.

The psychopath appears to be a social misfit, usually totally unmodifiable and exhibiting a deeply ingrained disorder of temperament.

NOTE: The author is indebted to Dr. Edward G. Billings, M. D., Associate Professor, University of Colorado, Department of Psychiatry; Psychiatric Consultant, South Pacific Base Command, for constructive suggestions and criticisms.

PSYCHOPATHIC PERSONALITIES WITH CRIMINALISM

Case no.	BAR GRAPH DATA									
	M	FM	m	k	K	FK	F	Fc	c	C ¹
1	I	5	I	2	0	0	5	I	0	0
2	0	I	I	3	0	0	8	0	0	I
3	I	2	0	I	0	0	12	I	0	0
4	I	3	0	2	I	I	10	I	0	0
5	Reject									

CONSTITUTIONAL PSYCHOPATHIC STATE—SEXUAL PSYCHOPATHY

Case no.	R	These blocks follow Rorschach score categories										Manner of approach			
		14	19	32	78	84	36	0	2	6:3	0	1:0	0:0	31	W: M
1	I	19	19	32	78	84	36	0	2	6:3	0	1:0	0:0	31	5:1
2	I	11	20	55	54	63	64	5	0	10:1	0.5	2:5	2:0	45	4:2
3	I	37	20	16	59	62	51	3	0	11:8	6.5	0:6.5	16:3	35	6:0
4	Reject														

Dd
and/or
S

W

D

d

0%

5%

68%

0%

5%

36%

0%

0%

16%

54%

27%

2%

SEXUAL PSYCHOPATHS

Case no.	BAR GRAPH DATA									
	M	FM	m	k	K	FK	F	Fc	c	C ¹
1	I	0	0	2	I	I	15	0	0	0
2	2	2	0	0	0	I	6	0	0	0
3	0	9	7	0	0	0	22	I	I	I
4	Reject									

Case no.	PARANOID PERSONALITY									
	M	FM	m	k	K	FK	F	Fc	c	C ¹
1	I	15	24	20	80	46	65	4	0	11:9
2	I	35	8	37	80	39	46	4	0	11:1

These blocks follow Rorschach score categories

Dd
and/or
S

W

D

d

33%

60%

0%

0%

23%

76%

0%

3%

PARANOID PERSONALITY

Case no.	BAR GRAPH DATA									
	M	FM	m	k	K	FK	F	Fc	c	C ¹
1	I	0	0	I	0	0	12	0	0	0
2	I	8	I	0	0	I	10	I	0	0

CLINICAL NOTES

A VETERAN USES GENERAL SEMANTICS FOR REHABILITATION

BY THE VETERAN¹

It was not with willingness and whole-hearted cooperation that this veteran of four campaigns in the South Pacific consented to give the information in this study. He felt, however, that doing so may help him relax. As far as putting to use the work of general semantics, it was a benefit; but, at first, to relate many incidents openly as in this paper was extremely difficult and he tended to relapse into the nervous condition he was in when released from the service.

Here are a few examples of misevaluation that will illustrate the problems of the veteran; many are extremely difficult to put into written description.

The fear of darkness, for quite some time, hindered many of his activities after sundown. It was hard to feel safe from enemy fire even as a civilian in the United States. Most of the evenings were spent in the home rather than venture outside. The veteran put to work general semantics and took long walks down side streets at night, keeping in mind that the darkness he then encountered was entirely different from that in combat. After a week or so of such procedure, he began to relax and take part in evening activities outside.

There is a great fear of crowds noticeable. Why this should be he cannot explain, unless it is due to the isolation and small numbers of men he encountered while in the Pacific area. To overcome this, he took walks in the downtown district and forced himself to mingle with people. He has partially overcome this fear and is still advancing. Perhaps one reason for his not mixing with people was the "silly conception" of war they expressed. At first, he lost his temper quickly

and made many cutting remarks to people. Later he developed a sullen silence refusing to comment on or discuss the situation except with those he felt were interested and were making an attempt to ease the situation. At present, he is most objective, trying to keep in mind that though there are remarks that irritate him, there is no possible way to understand the conditions without having experienced the same. Using this method of silence has helped a great deal with delay of reactions as an aid to evaluation. Though at first he reacted within himself, and carried all the marks of ill-will, at present he uses this period entirely for evaluation.

Tension was and still is quite noticeable; however, there is some improvement. After correct evaluation of sudden sounds, relaxation came easier. The veteran was in a constant state of anxiety, tensed to move quickly should it be necessary. Movements of all those about him, no matter how slight, are observed. He found the identification in his reactions with being constantly alert for movements in trees and bushes that might be those of the enemy in combat. Realizing this, he is more at ease.

When the veteran attended movies, he always left during the newsreel. He reacts to battle scenes as though he were present. It leaves him in a state of great anxiety and what might be termed "fresh combat fatigue." The veteran is striving to overcome this identification. In doing so, he remains in his seat and tries to keep in mind that it is just a screen with black and white pictures, rather than actual battle. There has been a noted improvement with regard to after-effect; however, while witnessing the scenes, he sweats profusely.

Aversion to noises such as the fire siren. Sirens were used in combat to alert soldiers for air raids. When the veteran hears sirens he breaks into a sweat and has great difficulty in controlling the desire to drop on the

¹ The writer of this report was a student in Professor Elwood Murray's class in general semantics at the University of Denver. The report was supplied by Count Alfred Korzybski, director, Institute of General Semantics, Chicago, and is presented substantially as the veteran wrote it, including the title.

ground. To make a proper evaluation, he visited a fire station and examined the sirens on the engines. Seeing them as they were and for the purpose they are now used, has contributed to more self-control.

Low flying planes also greatly affected him. He experienced a bombing in the early part of the war in which he was the sole survivor among some fifteen others. With exception of great shock and unconsciousness he was not injured. The low flying plane flashes this experience to his mind. To attempt to properly evaluate the situation, the veteran gained permission to enter an airfield and examine planes. He stood close to the runway when planes came in. This has not helped too much, but he believes he can train himself to picture peaceful maneuvers of friendly planes landing on an airstrip rather than death-dealing Jap bombers.

This leads into his problem of insomnia. He has many nightmares; however, the dream most often repeated is that of the action described above. In these dreams he breaks into a heavy sweat and awakens. Training in general semantics has not helped this situation. When the individual is asleep he cannot have the cortical control that he has during waking hours.

An example of pure identification comes out in the veteran's dislike for rice. His first view of the enemy dead was that of a Jap soldier which was in the process of deterioration. The bag of rice the soldier had been carrying was torn open and grains of rice were scattered over the body mixed in with maggots. When the veteran, to this day, sees rice, the above described scene is vivid and he imagines grains of rice moving in his dish. To overcome this, he has eaten rice several times trying to remember the rice before him is not the same as that on the body. Though the food is not relished, he has succeeded in overcoming the vomiting reflex at the sight of rice.

When first returned, the veteran had a great dislike for dogs resulting from experiences with native dogs. These dogs were seen to devour bodies of both American and Jap soldiers, which, of course, was most distasteful to the observer. When mongrels in the United States were seen, or even heard, the above scene flashed to the mind and

immediate hate for canines became prominent. To overcome this, he forced himself to pet dogs and remember that these dogs were quite different from those on the islands. At present, he is fairly well adjusted to the situation.

The veteran brought with him a Jap canteen. This canteen was in deplorable condition when he picked it up and needed some cleaning. Very seldom has he seen it since he has been back. Each time he has looked at it, the smell and surrounding conditions under which he was at the time come back to him. Also in connection with this reaction are some snap shots he brought back. These were in the same container until a short time back. They definitely had a mouldy odor; this, combined with scenes, was extremely hard on him. Since he has mounted the pictures and sunned them out, his reaction is much improved.

This veteran's reaction to soldiers who have not served overseas is most disagreeable. This reaction may come from notices put out overseas explaining that the reason for such extensive tours of duty was the shortage of replacements. When he returned and saw the great number of men on the streets, he developed a great dislike for them and without hesitation made slighting remarks. Since first returning there has been some improvement along this line; however, he still holds the grievance. He is trying to overcome this by keeping in mind that the individual himself cannot always help his status.

The oppression of army life has left him with a most serious attitude of rebellion. If asked to do something, he is most co-operative, but should someone order him, he flatly refused to co-operate. He has improved greatly, however, realizing that the situation is entirely different and in most instances, the cooperation betters his association with people.

Two weeks after the veteran had been discharged, he and his wife were visited by an elderly lady who was a friend of the family but had not been seen for several years. During the course of conversation, the veteran excused himself from the room. As he was leaving, he overheard the visitor ask, "Why

isn't your husband in the army?" He returned to the room and not too politely informed the visitor of his status. This led to a grave dislike for all elderly women. When the veteran began applying general semantics, he discovered the above. Since, he has tried to bear in mind that all elderly women are not the same as the one described.

He has partially overcome the intense dislike for them as a result.

The veteran has been using the semantic relaxation technique. It has been a very short time since he started; however, since he began he finds tension relieved and he is earnestly working with it in hopes of complete success soon.

CORRESPONDENCE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I have been surprised to observe in your correspondence no note of protest in reference to the article in the November 1945 issue of the *AMERICAN JOURNAL OF PSYCHIATRY* on "Psychoanalysis and the Unconscious" by Knight Dunlap. I had hoped that someone better qualified than myself would appear to answer Dr. Dunlap. Dr. Dunlap attempts to belittle Freud's accomplishments in founding the science of psychoanalysis by pointing out that there was nothing in it which was not either current in German psychology at the time or not derived from pre-Christian philosophical thought. No thinker works in a vacuum or completely *de novo* and it is absurd to expect it. Freud frequently acknowledged his indebtedness to others and showed how their theories were compatible or inconsistent with his own. To say that the libido is the successor to the ancient Greek psyche does not necessarily dismiss it as a useful psychological concept. Because Plato's theory of dreams superficially resembles Freud's or because there are traces of other men's ideas here and there in his work does not mean that his work was simply a hodgepodge of superstition and derivative ideas. Freud took the material that he had to work on and brought forth an original well documented system of thought that his predecessors had only half divined.

To condemn psychoanalysis, as Dr. Dunlap tries to, because there are several schools or sects of psychoanalysis is likewise illogical. There are many more and more widely divergent schools of thought in the field of psychology than there are sects of psychoanalysis. Dr. Dunlap tries to give the impression that there is unanimity of psychological thought and that all psychologists would accept his terminology and his definition of consciousness and unconsciousness.

Dr. Dunlap is guilty of gross misstatement when he claims that some M.D.'s

with no previous training have completed psychoanalytical training in less than two months. The requirements of the American Psychoanalytical Association are a year's internship and a year's full time work in a psychiatric hospital or clinic approved by the American Medical Association and the American Psychiatric Association. With these basic requirements the candidate must undergo a preparatory analysis and a course of theoretical and clinical instruction, which ordinarily takes 3-5 years. If Dr. Dunlap knows any place where this can be accomplished in two months, I would be grateful to him for the information. In the article on psychiatric education by Charles Rymer in the January 1946 *AMERICAN JOURNAL OF PSYCHIATRY* he states: "Although residencies in psychiatry for the most part are poorly supervised by hospital administrators and vaguely and unsatisfactorily accredited, this is not true of the six training institutes in psychoanalysis officially recognized by the American Psychoanalytical Association." One might more profitably inquire into the qualifications of the psychologists who Dr. Dunlap says have to repair the evil done by psychoanalysts.

Finally Dr. Dunlap confuses the processes of repression and suppression, the latter of which is a conscious process. Psychoanalysts nowhere maintain that we should give unbridled rein to all our impulses or that it is wrong to consciously suppress an asocial desire. What they do maintain is that an unconscious repression is frequently the source of a psychiatric symptom. The doctrine of the unconscious and its importance for understanding psychological mechanisms is widely accepted by many psychiatrists who do not accept other Freudian concepts and who do not approve of Freudian methodology.

Yours truly,

HENRY J. MYERS, M. D.

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: The only comment I wish to make on Dr. H. J. Myers' note is: My statement that I have known M. D.'s with no specific

psychiatric training, who became psychoanalysts in a few weeks, still stands.

Sincerely,

KNIGHT DUNLAP.

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Several months ago, Dr. Wm. Cadbury left San Francisco for Lingnan University in Canton, China to continue his medical missionary work and to teach medicine to his students. He wanted to return to his life's work in Canton, where he treated his first patient in 1909. Later, he helped establish the medical school of Lingnan University.

Dr. Cadbury arrived in Canton recently and found the university's hospital filled with destitute patients and the medical school's library entirely without books. He was in a Japanese concentration camp in 1942 when he was informed that the Japanese sold his medical books for fuel.

Many friends have given all the medicine the university hospital required for one year. Unfortunately, we are unable to replenish the medical school's library to a very large degree.

It is my sincere hope that you will come to the rally of a fellow colleague by sending him a gratis subscription of the reli-

able AMERICAN JOURNAL OF PSYCHIATRY. Through your generous contribution Dr. Cadbury will be able to teach medicine with one of the fundamental instruments—up-to-date journals.

Dr. Cadbury will rejoice to learn that the medical profession is still as cooperative, efficient, and ever ready with a helping hand when the occasion arises.

The good doctor's address is—Dr. William Cadbury, Lingnan University, School of Medicine, Canton, China.

Respectfully yours,

1ST LT. GEORGE D. FUNG, M. C.,
Section 4,
Madigan General Hospital,
Fort Lewis, Wash.

Dr. Cadbury's name has been entered on our mailing list for a complimentary subscription to the JOURNAL.

There may be those who read the above letter who will be able to assist by sending books, reprints or periodicals to the doctor to help him in the benevolent work he has undertaken.—EDITOR.

AWARDS AND CITATIONS IN NEUROPSYCHIATRY SUPPLEMENTARY LIST

MAJOR JOHN W. APPEL (now Lt. Colonel), Medical Corps, U. S. Army—*Legion of Merit*. As Chief, Mental Hygiene Branch, Neuropsychiatry Consultants Division, Office of The Surgeon General, from March 1943 to October 1945, contributed in an outstanding manner to the mental hygiene education of officers and enlisted personnel and the prevention of mental illness in the Army. His achievement reflected his outstanding ability and materially aided the nation's war effort.

LT. COMMANDER RICHMOND J. BECK, Medical Corps, United States Naval Reserve—*Commendation Ribbon*. For distinguished service in the line of his profession as Psychiatrist and Embarkation-Debarcation Officer aboard the U.S.S. *Solace* from November 1943 to July 1945. During this period he displayed professional skill and ability, demonstrating outstanding zeal and steadfast devotion to duty in his handling of casualties evacuated from beachheads. He exhibited a high degree of physical fortitude and endurance in expert treatment of the wounded and was directly responsible for saving the lives of many men suffering from shock and other combat disabilities. His personal attention to detail and leadership were an ever present source of inspiration. His services and conduct throughout were in keeping with the highest traditions of the United States Naval Service.

COLONEL WILLIAM J. BLECKWENN, Medical Corps, United States Army—*Legion of Merit*. For exceptionally meritorious conduct in the performance of outstanding services in the Southwest Pacific Area, from 4 March 1942, to 15 October 1943. Colonel Bleckwenn commanded a medical regiment, planned and established two United States Army hospitals in Northern Territory, Australia, where extensive air operations were being carried out by the United States Army Air Forces. Providing vitally needed hospital facilities in an area from which evacuation was difficult, he was instrumental in saving the lives of many wounded officers and men. In January 1943, at an advance base in New Guinea, he employed his own troops for labor, and, utilizing salvaged materials at hand, constructed a model one thousand bed general hospital. Responsible for all medical installations throughout New Guinea, Colonel Bleckwenn established the first neuropsychiatric service in that region and was responsible for the rehabilitation of many patients, who returned to their units without further hospitalization. From June to November 1943, he directed preparations for the medical support of military operations along the north coast of New Guinea. By his outstanding professional skill, resourcefulness and organizing ability, Colonel Bleckwenn made a noteworthy contribution to the support of military operations in Australia and New Guinea.

COLONEL WILLIAM J. BLECKWENN, M. C., A. U. S. *Legion of Merit* (Oak Leaf Cluster).—Rendered distinguished service as Consultant in Neuropsychiatry, Sixth Service Command, from July 1944 to November 1945. With a background of rich experience in the actual handling of nervous and mental casualties in the combat area, he displayed unusual foresight and understanding in organizing the program of treatment for mentally disabled returnees.

CAPTAIN FRANCIS J. BRACELAND, Medical Corps, U. S. Naval Reserve—*Legion of Merit*. For exceptionally meritorious conduct in the performance of outstanding services to the Government of the United States as Special Assistant in Psychiatry to the Surgeon General of the Navy, and later as Chief of the Division of Neuropsychiatry, Bureau of Medicine and Surgery, from January 1942 to October 1945. Possessing an international reputation in the field of psychiatry, Captain Braceland was responsible for the procurement and training of medical officers and enlisted personnel to adequately establish psychiatric services to all Naval Hospitals in the United States and the Advanced Bases. His medical knowledge and ability contributed immeasurably to the welfare of the Naval Medical Corps during these critical years.

MAJOR ALLEN W. BYRNES, M. C.—*Bronze Star Medal*. For distinguishing himself by meritorious service in connection with military operations against an enemy of the United States from 27 June 1944 to 31 December 1944, in France, Luxembourg, Germany, and Belgium. As Division Neuropsychiatrist, Major Byrnes assumed responsibility for the supervision, treatment and evacuation of all neuropsychiatric cases. His organization and operation of a Division Combat Exhaustion Center was characterized by outstanding efficiency. His ability and determination merit the highest praise and reflect great credit upon himself and the military service.

COLONEL JOHN M. CALDWELL, JR., M. C., U. S. Army—*Bronze Star Medal*. For meritorious achievement at Hollandia, Dutch New Guinea from 4 August 1944 to 30 June 1945, in connection with military operations against the enemy. As Commanding Officer of a large General Hospital, Colonel Caldwell was responsible for its construction and operation and for the furnishing of medical and surgical service to combat troops evacuated from forward areas as well as those staging locally. Through his improvisation of utilities and expert management of all available manpower the hospital was prepared to receive patients within two months after construction had started. Within the following two month period its capacity was increased by more than 200 per cent of its original

1000 bed authorization and even while operating at maximum capacity, he maintained the highest professional standards of medical care and inspired the staff by his unremitting perseverance and personal example. By his resourceful administration, indefatigable efforts, and devotion to duty, Colonel Caldwell expedited the return to service of many thousands of rehabilitated personnel and contributed greatly to the humane disposition of the disabled.

ROSS M. CHAPMAN—*Certificate of Merit* (Selective Service Medal). In acknowledgment and appreciation of patriotic services performed without compensation in the administration of the Selective Training and Service Act of 1940, during the period from January 1, 1941 to January 1, 1946.

LT. COLONEL WILLIAM H. DUNN, M. C.—*Legion of Merit*. Lt. Colonel Dunn rendered distinguished service as Neuropsychiatric Consultant, Fifth Service Command, from October 1944 to December 1945. He energetically introduced new and improved techniques for the treatment of neuropsychiatric disorders, markedly reducing the period of hospitalization and effectively resocializing a great number of disabled military personnel.

WILLIAM RUSH DUNTON, JR.—*Certificate of Merit* (Selective Service Medal). In appreciation of your loyal and faithful adherence to duty given voluntarily and without compensation to the impartial administration of the Selective Service System, the Government of these United States expresses its gratitude in this public recognition of your patriotic services.

LT. COLONEL WILLIAM H. EVERTS, M. C.—*Legion of Merit*. Serving in the Neuropsychiatric Consultants Division, Office of The Surgeon General, from September 1943 to June 1945, Lt. Colonel Everts displayed professional ability and vision in developing a policy for the diagnosis and treatment of organic diseases and injuries of the nervous system. He was in large measure responsible for the splendid record made by the Army in its management and care of neurological patients.

MAJOR HOWARD D. FABING, Medical Corps, U. S. Army—*Legion of Merit*. For exceptionally meritorious conduct in the performance of outstanding services as Director of the School of Neuropsychiatry, 36th Station Hospital, European Theater of Operations, from 15 November 1943 to 30 June 1944. Major Fabing supervised the various courses and did all the teaching of division medical officers at the neuropsychiatry school. Through his efforts, the training film entitled "Combat Exhaustion" was produced. He standardized the remedial therapy for the effective treatment of front line neuropsychiatric casualties so that over half the men suffering from this disturbance could be returned to duty within a week. Very few of the men who attended the school had any previous special training in psychiatry, but, by employing the methodology taught by Major Fabing, they have been successful in treating psychiatric casualties in the combat zones.

LT. COLONEL MALCOLM J. FARRELL—*Legion of Merit*. As Deputy Director, Neuropsychiatry

Consultants Division, Office of The Surgeon General from April 1942 to June 1945, displayed exceptional ingenuity and foresight. As a result of his initiative and resourcefulness, division psychiatrists were appointed, mental hygiene consultation services established throughout the country and a critical backlog of psychiatric patients in the Pacific Theater eliminated.

CAPTAIN JAMES B. FUNKHOUSER, Medical Corps—*Bronze Star Medal*. For meritorious achievement in connection with military operations in Italy from 1 May 1944 to 8 May 1945. Captain Funkhouser, as Assistant Chief of the Neuropsychiatric Section of the 45th General Hospital, had sole charge of the locked wards of the Neuropsychiatric Section. During this period 1,456 locked-ward patients were admitted with an average of 121 new cases each month. As trained personnel, both nurses and corpsmen, was not available, an intensive course of instruction was conducted by Captain Funkhouser, and because of emotional or intellectual incompatibility there was a continuous turn-over in personnel assigned making necessary the continuation of this course throughout the entire period. Despite the handicap of inadequate ward and recreational facilities for care of these patients, many of whom were criminally insane, not one incident of any significance occurred and no patient permanently harmed himself or did harm to others. Captain Funkhouser was one of the pioneers in the use of electric shock therapy which renders these patients quickly and easily transportable and recognized the importance of evacuating patients from the theater as promptly as possible in order that they might not continue to be a burden of unusable manpower. The remarkable record of accomplishment established in his section was due to the untiring and unremitting efforts of Captain Funkhouser, his training and indoctrination of the personnel assigned and the vigilance and conscientious devotion to duty with which he inspired them.

LT. COLONEL JOHN H. GREIST, M. C.—*Army Commendation Ribbon*. For meritorious service as Neuropsychiatric Consultant, Office of the Surgeon, Headquarters Seventh Service Command, Omaha, Nebraska, from 27 June 1945 to 28 February 1946. He visited hospitals, conducted clinics, taught classes, made public appearances, and by his leadership and personality stimulated a quality of psychiatry that would not otherwise have been possible, and contributed materially to the success of the medical program of the Service Command.

LT. COLONEL ARTHUR O. HECKER, M. C.—*Bronze Star Medal*. For meritorious service in connection with military operations, as Medical Service Coordinator, 12th Hospital Center, from 1 May 1944 to 8 May 1945. Lieutenant Colonel Hecker's efforts in the skillful placement of professional men and the resultant increased efficiency in operation of the Medical Services of the 12th Hospital Center, his keen judgment in establishing policies for the disposition of thousands of cases of neuropsychiatric disorder, trench foot and malaria caused many useful men who would otherwise have been returned home to be transformed from battle casualties into

efficient soldiers in the European Theater of Operations. At all times he showed utmost willingness to assume extra duties and he always turned in a superior performance, no matter what the task. By his superb technical ability and his outstanding devotion to duty, Lieutenant Colonel Hecker has contributed immeasurably to the successful operations of the Medical Corps.

MAJOR DAVID W. HILGER, M. C.—*Army Commendation Ribbon*. "During World War II The Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and I wish to commend you for your outstanding contribution as Assistant Chief, Mental Hygiene Branch, Neuropsychiatry Consultants Division, Office of The Surgeon General, from 29 April 1944 to 9 June 1945."

MAJOR JOHN M. FLUMERFELT—*Army Commendation Ribbon*. During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and I wish to commend you for your outstanding contribution as Chief, Psychiatry Branch, Neuropsychiatry Consultants Division of the Office of The Surgeon General, from 16 July 1945 to 4 January 1946.

MAJOR HARRY L. FREEDMAN.—*Army Commendation Ribbon*. Major Freedman as Director, Mental Hygiene Unit, Headquarters, Eastern Signal Corps Unit Training Center, Fort Monmouth, New Jersey, from 22 December 1941 to 22 November 1943, capably discharged important responsibilities in the organization and operation of a Psychiatric Unit for the reclassification and elimination of maladjusted soldiers.

MAJOR HARRY L. FREEDMAN, M. C., A. U. S.—*Legion of Merit*. As director, Mental Hygiene Division, ASFTC, Camp Plauche, New Orleans, Louisiana, from 20 July 1944 to 2 January 1946, displayed exceptional skill and was eminently successful in the organization and direction of this unique staff section. His unit handled more than four thousand cases of maladjusted soldiers. With the aid of this outstanding service the problem of eliminating non-effectives from this command was solved in a highly efficient manner. In achieving this objective, he exhibited an unusually high degree of resourcefulness and creativeness which aided immeasurably in the accomplishment of military missions which are vital to the maintenance of the mental health of military personnel. Through unselfish devotion to duty, leadership, and exemplary performance Major Freedman reflects credit to the service, his profession, and himself.

LT. COLONEL RONALD H. KETTLE, M. C.—*Bronze Star*. For meritorious service in connection with

military operations against the enemy during the period 5 December 1944 to 2 September 1945. In the final phase of the successful very long range bombardment of the Japanese homeland from bases in the Marianas, Colonel Kettle contributed substantially and directly to B-29 operations. He displayed rare devotion to duty and efficiency in the prosecution of his assigned tasks. Despite the tremendous work load occasioned by rapidly accelerated combat operations, he performed his duties with distinction and success. Colonel Kettle's determination and skill played an integral part in the final victory over the enemy, reflecting great credit on himself and the Army Air Forces.

MAJOR HERBERT S. GASKILL, M. C.—*Army Commendation Ribbon*. During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and you are commended for your outstanding contribution as Chief of the Psychiatry Branch, Neuropsychiatry Consultants Division, Office of The Surgeon General, from 2 June 1945 to 21 November 1945.

TECHNICAL SERGEANT FRANK T. GREVING, Medical Department, A. U. S.—*Legion of Merit*. For outstandingly meritorious service as Sergeant Major of the Mental Hygiene Unit, for his contribution in the conception of the first Mental Hygiene Unit in the Army established at Fort Monmouth, New Jersey; for superlative performance while reconditioning neuropsychiatric casualties in the capacity of Sergeant Major, Mental Hygiene Unit, England General Hospital, Atlantic City, New Jersey. In these positions of responsibility, he exhibited an unusually high degree of resourcefulness and creativity which aided immeasurably in the accomplishment of military missions which were vital to the maintenance of the mental health of military personnel. Through unselfish devotion to duty, leadership, and exemplary performance, Technical Sergeant Greving reflects credit to the service, his profession, and himself.

ROSCOE HALL—*Certificate of Merit* (Selective Service Medal). In acknowledgment and appreciation of patriotic services performed without compensation in the Administration of the Selective Training and Service Act of 1940, during the period January 1, 1941 to January 1, 1946.

MAJOR ALFRED O. LUDWIG, M. C.—*Army Commendation Ribbon*. For outstanding service from 23 August 1945 to 17 December 1945. Major Ludwig prepared comprehensive studies which aided greatly in formulating policies for the effective prevention, treatment and salvage of neuropsychiatric casualties. By his personal initiative, conspicuous ingenuity and efficiency he contributed materially to the success of the Medical Service in combat operations.

COLONEL MARC J. MUSSER, M. C., U. S. Army.—*Legion of Merit*. For exceptionally meritorious conduct in the performance of outstanding services

in the Southwest Pacific Area, from 14 June 1943 to 23 March 1945. As Commanding Officer, 135th Medical Regiment, later redesignated the 135th Medical Group, Colonel Musser displayed outstanding professional skill in the establishment and maintenance of an effective evacuation service during campaigns of Sixth Army forces from Papua to Luzon. He established and directed ambulance evacuation in Port Moresby and Milne Bay, Papua, and in Finschhafen, British New Guinea, and supervised the training and equipping of clearing and collecting companies of his regiment for participation in major amphibious operations in the Southwest Pacific Area. Although his units were operating over wide areas throughout the theater, he made frequent inspections and maintained cohesion and high morale among his troops. Similarly, he exercised supervision over land, sea, and air evacuation for the Leyte operation and through his leadership and organizational ability, the mission was accomplished with marked success. Again charged with all evacuation during the Luzon Campaign, he established a complex and highly efficient system designed to meet any exigency, and further instituted the large scale use of light liaison aircraft, effectively expediting the evacuation of combat casualties. Through his driving energy, resourcefulness, and unflinching devotion to duty, Colonel Musser made a conspicuous contribution to the exceptional care of the wounded throughout the theater.

MAJOR DANIEL E. O'KEEFE, M. A. C.—*Army Commendation Ribbon*. During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Major O'Keefe's service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and he is commended for his outstanding contribution as the Chief Psychiatric Social Worker, Neuropsychiatry Consultants Division, Office of The Surgeon General, from 17 July 1945 to 10 January 1946.

CAPTAIN LAWRENCE I. O'KELLY, M. A. C.—*Army Commendation Ribbon*. During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Captain O'Kelly's service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and he is commended for his outstanding contribution as Deputy Chief and later as the Chief Clinical Psychologist in the Neuropsychiatry Consultants Division, Office of The Surgeon General, from 30 August 1945 to 10 January 1946.

WINFRED OVERHOLSER—*Certificate of Merit* (Selective Service Medal). In acknowledgment and appreciation of patriotic services performed without compensation in the administration of the Selective Training and Service Act of 1940, during the period from January 1, 1941 to January 1, 1946.

MAJOR HARRY L. MACKINNON, Medical Corps, U. S. Army—*Bronze Star Medal*. For meritorious achievement in connection with military operations against the enemy on Luzon, Philippine Islands from 31 January 1945 to 4 March 1945.

HUGO MELLA—*Certificate of Merit* (Selective Service Medal). In acknowledgment and appreciation of patriotic services performed without compensation in the administration of the Selective Training and Service Act of 1940, during the period from January 1, 1941 to January 1, 1946.

MAJOR JOSEPH J. MICHAELS, Medical Corps, A. U. S.—*Citation for Legion of Merit*. As Chief, Neuropsychiatric Service, Newton D. Baker General Hospital, Martinsburg, West Virginia, from June 1943 to December 1945, created and maintained an organization which rendered service of immeasurable value to patients suffering from nervous and mental disorders. He repeatedly demonstrated his outstanding professional skill, managerial ability and unselfish devotion to the welfare of the mentally ill.

CAPTAIN WARREN B. MILLS, Medical Corps—*Army Commendation Ribbon*. Performed meritorious services from 13 December 1944 to 14 January 1946, as Chief of Electroencephalography, Neuropsychiatric Service, and Asst. Chief, Neurology Section, Neuropsychiatric Service, Newton D. Baker General Hospital, Martinsburg, West Virginia. Accomplishing highly professional assignments with distinction, Captain Mills reflected great credit on himself and the military service.

MAJOR MARVIN R. PLESSET, M. C.—*Bronze Star Medal*. For meritorious service in connection with military operations against the enemy during the period from 13 December 1944 to 18 April 1945, in Germany. Major Plesset, Division neuropsychiatrist, displayed praiseworthy skill and judgment in the discharge of his duties. Under his expert treatment and control, cases referred to him for consultation were promptly and efficiently treated, thereby effecting a great saving of manpower to the Division. His willing, cooperative attitude and professional skill are in accordance with the highest military traditions.

CAPTAIN ROBERT T. PORTER, Medical Corps—*Army Commendation Ribbon*. Performed meritorious services from 9 July 1944 to 14 January 1945, as Chief, Closed Ward Section, Neuropsychiatric Service, Newton D. Baker General Hospital, Martinsburg, West Virginia. Accomplishing highly professional assignments with distinction, Captain Porter reflected great credit on his profession and the military service.

COLONEL WILLIAM C. PORTER, M. C., A. U. S.—*Legion of Merit*. As Director, School of Military Neuropsychiatry, Mason General Hospital, Long Island, New York, from October 1943 to December 1945, effectively presented an intensive program of practical psychiatry. By his expert professional knowledge and exceptional ability to impart his ideas to his students, he contributed materially toward a more efficient handling of neuropsychiatric problems arising in the Military Service.

STAFF SERGEANT MYRON JOHN ROCKMORE, Medical Department, Army of the United States—*Legion of Merit*. For outstanding meritorious service as Chief Psychiatric Social Worker, Mental Hygiene Division, Army Service Forces Training Center, Camp Plauche, New Orleans, Louisiana, for superlative performance while reconditioning neuropsychiatric casualties in the capacity of Chief Psychiatric Social Worker, Mental Hygiene Unit, England General Hospital, Atlantic City, New Jersey, and for his contribution in the conception and operation of the first Mental Hygiene Unit in the Army established at Fort Monmouth, New Jersey. In those positions of responsibility, he exhibited an unusually high degree of resourcefulness and creativity which aided immeasurably in the accomplishment of military missions which were vital to the maintenance of the mental health of military personnel. Through unselfish devotion to duty, leadership, and exemplary performance, Staff Sergeant Rockmore reflects credit to the service, his profession, and himself.

COLONEL LAUREN H. SMITH, M.C.—*Legion of Merit*. Colonel Lauren Howe Smith, M.C., A. U. S., distinguished himself as Neuropsychiatric Consultant, Office of the Surgeon, Ninth Service Command, from November 1943 to November 1945. He ably directed training and assignment to augment the number of available officers in this critical specialty and his achievements significantly contributed to the psychiatric rehabilitation and reconditioning programs within the Command.

COLONEL PAUL L. SCHROEDER, M.C., A. U. S.—*Legion of Merit*. As Consultant in Neuropsychiatry, Fourth Service Command, from March 1944 to October 1945, exhibited an unusually high degree of professional skill and outstanding administrative ability. He made significant contributions to the success achieved at all stations within the Command in the diagnosis and treatment of patients suffering with neuropsychiatric disorders.

COLONEL MORTON T. SEIDENFELD, M. A. C.—*Army Commendation Ribbon*. During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Colonel Seidenfeld's Service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and he is commended for his outstanding contribution as Chief Clinical Psychologist, Neuropsychiatry Consultants Division, Office of The Surgeon General, from 20 December 1943 to 15 November 1945.

GEORGE S. STEVENSON—*Certificate of Merit* (Selective Service Medal). In acknowledgment and appreciation of patriotic services performed without compensation in the administration of the Selective Training and Service Act of 1940, during the period from January 1, 1941 to January 1, 1946.

COLONEL DOUGLAS ARMOUR THOM, M.C., A. U. S.—*Legion of Merit*. As Consultant in Neu-

ropsychiatry, Second Service Command, from 17 May 1943 to 8 September 1945, rendered distinctive and outstanding services. Bringing to his assignment a wealth of experience and a deep understanding of the mentally ill, Colonel Thom was largely responsible for the success obtained both in psychotherapy and in reconditioning the neuropsychiatric patient. He rendered invaluable service in furthering the highest quality of diagnosis and professional care in this phase of medicine at all stations within the supervision of the command. His assistance in professional organization, practices, and training programs at Mason General Hospital materially contributed to the eminence of the Army's largest psychiatric facility. Colonel Thom continuously directed all of his energies to promoting a kindly attitude toward the mental patient. His efforts and accomplishments reflect highest credit upon himself and the Medical Corps.

CAPTAIN EDWIN A. WEINSTEIN, M. C., A. U. S.—*Bronze Star Medal*. For meritorious services in support of combat operations from 1 August 1944 to 2 May 1945, in Italy. Captain Weinstein, as Chief psychiatrist of the Fifth Army Psychiatric Center, maintained the professional work of the center at the highest level, and by so doing was directly responsible for reducing the manpower loss from psychiatric casualties to an absolute minimum. His clear understanding of the practical aspects of psychiatric disabilities contributed immeasurably to the prevention of emotional disorders among Fifth Army troops. Captain Weinstein exhibited rare initiative and skill in the organization of professional conferences for Fifth Army psychiatrists to coordinate clinical experiences in current situations, contributing materially to the formulation of effective professional policies in the battle area. His unremitting efforts reflect credit to himself and are in keeping with the finest traditions of the Medical Corps of the United States Army.

SPECIALISTS IN NEUROPSYCHIATRY, U. S. NAVY

*CAPT. FRANCIS J. BRACELAND, U.S.N.R., *Legion of Merit*.

LIEUT. JOSEPH M. FOLEY, U.S.N.R., *Bronze Star Medal*.

CAPT. DAVID C. GAEDE, U.S.N., *Legion of Merit*.

*CAPT. BARTHOLOMEW W. HOGAN, U.S.N., *Navy and Marine Corps Medal, Silver Star Medal*.

LT. CDR. STUART C. KNOX, U.S.N.R., *Gold Star* in lieu of second *Silver Star Medal*.

CAPT. RAYMOND J. MANSFIELD, U.S.N.R., *Legion of Merit*.

*CAPT. ACLPFAR A. MARSTELLER, U.S.N., *Legion of Merit*.

U. S. PUBLIC HEALTH SERVICE

SURGEON LOUIS JACOBS, *Selective Service Medal*.

* Members of the Association.

COMMENT

THE CHICAGO MEETING

The first meeting in the second century of the life of the Association was held at the Palmer House, Chicago, from May 27 to 30, 1946, under unusual circumstances. It was the first peace-time meeting since 1941, so that many of our members who served in the armed forces were able to attend. On the Friday preceding, after many warnings, a nation-wide railroad strike had materialized, and many members for a time at least had serious doubts of their ability to reach Chicago. Nevertheless, the meeting set a record for attendance of members—1076! The number of out-of-town guests suffered by reason of the uncertainties of transportation, yet the non-member registration reached 937, making a total attendance of 2013.

The Program Committee, under the chairmanship of Dr. William Malamud, had labored diligently during the year, and presented a well-balanced arrangement of papers totalling no less than 120 (some presented, as usual, by title only). On the first morning, after the usual addresses of welcome and business details, four sessions heard papers respectively on Psychiatry in Industry, Psychiatric Social Work, Administrative Psychiatry, and Rehabilitation. The afternoon saw the meetings of the Section on Psychoanalysis (jointly with the American Psychoanalytic Association) and of the Sections on Convulsive Disorders, Forensic Psychiatry, and Psychopathology of Childhood. Tuesday morning, following the election of officers (which was enlivened by nominations from the floor) the main session was devoted to Psychiatry in the Military and Public Health Services during the War, with simultaneous sessions on Experimental Investigation, and on Constitution and Heredity. The afternoon sessions were occupied with discussions of Psychiatric Services of the Veterans Administration, Psychosomatic Studies, and Treatment. In the evening the traditional "round tables" were held—tradi-

tional, that is, except for the fact that they were *not* preceded by group dinners. The attendance at some of these informal discussions, nine in number, was substantial, as usual.

The morning session on Wednesday, after the election of members and the presentation of reports, was devoted to two addresses by invited speakers. Dr. Paul R. Hawley, medical director of the Veterans Administration, discussed the place of psychiatry in the Veterans Administration program, and Professor Harlow Shapley gave one of his inimitable and stimulating addresses, entitling it Planets are Predictable. Following the Devereux luncheon, at which Dr. Karl A. Menninger discussed psychiatric training, Dr. Bowman presented his presidential address. A forum on the Future of the Association was then held, organized by the Special Committee on Reorganization. This application of group discussion techniques showed itself to be useful in organizational as well as in psychiatric practice.

At the annual dinner that evening the Salmon Medal for distinguished service to psychiatry was presented for the second time in the history of the Association, this time to Dr. Joseph W. Moore of Albany for his epoch-making work in demonstrating the spirochaete in the brain of paretics; unfortunately, Dr. Moore was unable to attend. At this time also formal announcement of the Psychiatric Foundation under the auspices of the Association was made.

Professor Raymond Moley of Columbia Law School gave a thoughtful and provocative address on A New World with an Old Mind. The dinner concluded with a dance program by Ruth Page and Bentley Stone; general dancing followed.

The concluding day was devoted to papers on such topics as Psychiatry in Medical Education, Group Psychotherapy, Psychopathology, Psychiatric Studies of Social Problems, and Shock Therapy.

At any meeting of the Association far more business is transacted than the reading of papers. The Council held four meetings and made recommendations which were accepted by the Association. These will be detailed in the next issue of the JOURNAL. A few points may be mentioned briefly. New York City was selected as the place of the 1947 meeting (May 19-23, Hotel Pennsylvania). An extensive report of the Committee on Standards and Policies was accepted, and it was voted to distribute it to the governors and health authorities of the several states. It was voted to enlarge the Special Committee on Reorganization to not more than 15 and to authorize it to consult with the Committee on Program on the program for the forthcoming meeting. Four affiliated societies were admitted; the Colorado Neuropsychiatric Society, the New Jersey Neuropsychiatric Association, the North Carolina Neuropsychiatric Association and the Neuropsychiatric Society of Virginia. The Special Committee on Psychiatry in the Armed Forces was discharged upon its own request. A Section on Military Psychiatry and a Standing Committee on Military Psychiatry were established. A Committee on Preventive Psychiatry was also established. It was voted to establish the JOURNAL on a monthly basis as soon as circumstances permit, and to distribute the army films on psychiatry as requested by the Surgeon General. Dr. Kenneth Appel was nominated to the American Board of Psychiatry and Neurology, and Dr. C. C. Burlingame was named as delegate to the meeting of the Royal Medico-Psychological Association to be held in Edinburgh in July 1946. It was voted to record the Association's opposition to the threatened limitation of activity of St. Elizabeths Hospital as embodied in the reorganization plans now pending in Congress.

The following officers were elected: President, Dr. Samuel W. Hamilton; President-Elect, Dr. Winfred Overholser; Secretary-Treasurer, Dr. Leo H. Bartemeier; Auditor, Dr. George H. Preston; Councillors, Dr. Kenneth E. Appel, Dr. Karl M. Bowman,

Dr. William C. Menninger, Dr. Thomas A. C. Rennie. Officers of Sections: Convulsive Disorders, Chairman, Dr. Willard H. Veeder, Secretary, Dr. H. Houston Merritt; Forensic Psychiatry, Chairman, Dr. Hervey M. Cleckley, Vice Chairman, Dr. George M. Lott, Secretary, Dr. Richard L. Jenkins; Military Psychiatry, Chairman, Dr. Francis J. Braceland, Secretary, Dr. Lauren H. Smith; Psychoanalysis, Chairman, Dr. Robert P. Knight, Vice-Chairman, Dr. Gregory Zilboorg, Secretary, Dr. Dexter Bullard; Psychopathology of Childhood, Chairman, Dr. Reynold A. Jensen, Vice-Chairman, Dr. Malcolm J. Farrell, Secretary, Dr. Oscar J. Raeder; Executive Committee, Dr. Franklin Robinson and Dr. Lauretta Bender.

The local committee, under the chairmanship of Dr. Clarence A. Neymann, had been assiduous in its planning. For the ladies there were a lecture and tea at the Art Institute, and a luncheon and fashion show at the Marshall Field stores. On Monday evening, instead of the smaller cocktail parties originally planned, a large one was held. In addition to the flow of soul (?) an excellent entertainment was provided, followed by general dancing. The entertainment following the annual dinner has already been mentioned. The Illinois Psychiatric Society and the Illinois Neurological Society were both involved in the hospitality, and the thanks of the Association have been officially extended.

As always, the Palmer House acquitted itself nobly. The facilities for exhibits (the exhibits, both scientific and commercial, were excellent) and meetings were superb, and the efficiency and courtesy of the officials and employees of the hotel are deserving of the highest praise.

To sum up this report, then, the 102nd annual meeting was an unqualified success. Our total membership now stands at 4009; interest in the activities of the Association is high on the part of members and public, so we may well feel that the second century is off to a good start.

WINFRED OVERHOLSER, M. D.,
Secretary-Treasurer.

A GLIMPSE BEHIND THE CURTAIN

GENETICS IN THE U.S.S.R.

Widespread interest is sure to be aroused by a recent Russian book on genetics.¹

Lysenko speaks with some authority for he is a member of the Academy of Sciences, a responsible administrator, and director of important research laboratories in the U. S. S. R., such as the All-Union Institute of Selection and Genetics. His considered views on genetics as here summarized from public lectures can only be regarded as incredibly revolutionary and reactionary. His book will have its many amazed readers chiefly because it offers a fleeting glimpse of some curious trends a science may take when it develops in isolation.

Some ten years ago the first muffled reports reached the outside world of an ideological campaign against genetics in the U. S. S. R. Sympathetic visiting geneticists began to return home somewhat disillusioned. Russian research workers previously active suddenly ceased publication. The International Congress of Genetics scheduled for Moscow in 1939 was cancelled by the Soviet government at the last minute, and a meeting was subsequently arranged in Aberdeen without Russian representation. This domestic controversy evidently raged over a number of issues: the publication of data showing racial I.Q. differences; the subservience of science to the state and to political doctrine; dialectic materialism and the traditional scientific method; and, more specifically, over the relative merits and success of genetic methods of improving crops as compared with Lysenko's cereal "vernalization" treatments and Minchurin's "graft hybridization." In this contest the extreme Leftist or Egalitarian faction apparently won out.

In substance Lysenko here challenges, and summarily rejects, or ignores as irrelevant or unimportant, all the main post-Darwinian advances, so laboriously made and solidly established, in our knowledge of the mecha-

nisms of inheritance. He attacks especially "Mendelian-Morganian genetics," the "pea law," the "allegedly constant ratios" in crossing experiments, the gene as the physical basis of heredity. The more precise cytological proofs and the chromosome theory are held to be no less than sheer "invention," and "completely unacceptable to a biologist." Genes are "granules of unapprehended material" "allegedly known only to them" (the geneticists)! Thus does the author hack vigorously at the very roots of modern genetic science.

Obviously distressed by statistical exactness, he substitutes an easier going home-made synthesis of comparatively vague, naive and dubious theories. In general he reverts to outdated positions, held 80 years ago and soon tested and abandoned. Though these men are not credited, the views expressed trace clearly to Lamarck and Spencer (the inheritance of acquired characters), and to Darwin (the provisional hypothesis of pangenesis).

Lysenko is consistent throughout in exalting the role of external conditions. New and different conditions force changes and create "a different nature, a different heredity." Altered nutrition or temperature, for instance, continually "build over" the living body, and form "substances," which accumulate and "become fixed and assimilated in the sex cells." Fertilization is a metabolic process of "mutual consumption" of the fusing gametes. "Heredity is the essence of the conditions of the external environment assimilated by the organism in a series of preceding generations." The external "becomes an integral part of the heredity." He interprets his own experiments as showing that in this way hereditary winter wheats are rapidly "destabilized" and transformed into hereditary spring wheats simply by spring sowing.

The "conservatism of the nature of organisms" may also be "liquidated" through grafting or hybridization. Pages are devoted to Minchurin's "method of the mentor" in vegetative hybrids, where a young scion of tomato or potato grafted on to an older,

¹ T. D. Lysenko, 1946, "Heredity and Its Variability," 55 pp. published in Russian 1943, revised 1944, and now translated by Professor T. Dobzhansky of Columbia University. King's Crown Press, Morningside Heights, New York.

more vigorously growing, stock of another variety or species, is "educated" or "improved" to "create new superior varieties." Thus his students (directly contradicting the universal experience) report that the scion acquires from the stock permanent hereditary changes in fruit color or shape, leaf shape, taste and earliness of maturity. These changed branches, moreover, when bred from seeds, show variable pseudomendelian "ratios." For Lysenko's school graft hybrids and sexual hybrids do not differ in principle, and both exhibit in all ill-defined degrees segregation, blending, dominance, recessiveness, hybrid vigor, etc.

To the reviewer it would seem that, despite Lysenko's power and prestige, the ultimate significance of his revolt against

genetics may easily be overrated. It is perhaps, fairer to surmise that he has been doing some personal feuding, and may not after all, really dominate or faithfully represent Soviet geneticists as a whole. Accordingly we note with relief that even now some of his colleagues in animal genetics are publishing sound researches in current numbers of the *American Naturalist* and the *Journal of Heredity*, and are again cooperating in developing their science on a unified international front.

We may reasonably doubt whether the frail plant Lysenko has reared in protected seclusion can long survive in the atmosphere of free criticism to which it is now exposed.

JOHN W. MACARTHUR, PH. D.,
University of Toronto.

NEWS AND NOTES

THE WESTERN STATE PSYCHIATRIC INSTITUTE AND CLINIC, PITTSBURGH, PA.—The first Annual Coordinating Conference was held at the Institute April 4-5, 1946. The aims of the Conference were to coordinate the services of psychiatry, psychiatric nursing, clinical psychology and psychiatric social service; to promote the work of the professional personnel in these fields; and to encourage the mutual contributions of psychiatry and general medicine. Approximately 800 individuals attended.

On the first day the morning session was devoted to administrative problems with Dr. Grosvenor B. Pearson, director of the Institute, Dr. Howard K. Petry and the Honorable Miss S. M. R. O'Hara, Secretary of Welfare, as speakers. In the afternoon group psychotherapy in adults was discussed by Dr. Samuel B. Hadden and a panel was devoted to the treatment of overactive and agitated patients. The principal speaker at the dinner meeting was Dr. Samuel Hamilton, president-elect of the American Psychiatric Association, who discussed "The Psychiatric Hospital in the Community."

Concurrent sessions in psychiatric social service, psychiatric nursing and psychology occupied the second day of the Conference. The speakers on the social service program included Mrs. Henrietta B. DeWitt, Miss Ruth Gartland and Mr. Nelson Johnson. At the sessions in psychiatric nursing the speakers were Mrs. Lela Anderson and Dr. James H. Wall. The psychology sessions provided an exhibit of materials for the study of the personality, a case demonstration employing these techniques, and a symposium on research in psychology presided over by Dr. Henry A. Murray.

INTERNATIONAL CONGRESS ON MENTAL DEFICIENCY.—At the annual meeting of the American Association on Mental Deficiency held in Cleveland last November, it was decided to make 1948 a year of special celebration for the association to commemo-

rate the centennial of the first American institutions for the mentally retarded which were established in Massachusetts in 1848.

It was decided to plan for an International Congress on Mental Deficiency to be held in Boston in May or June of 1948 under the leadership and guidance of Dr. C. Stanley Raymond as chairman of the committee. This would be the first of possibly other international congresses on the subject of mental deficiency. There will be members on Dr. Raymond's committee from each one of the continents. A complete list of the committee is to be presented to the council of the association at its annual meeting in Montreal October 2, 1946. The list of the committee will be published later.

BIOLOGICAL PHOTOGRAPHIC ASSOCIATION.—This Association will hold its sixteenth annual meeting at the Hotel La Salle in Chicago, September 5, 6 and 7, 1946. Experts in the fields of biological and clinical photography will give illustrated talks on new developments in methods and equipment. Techniques of still and motion-picture photography, copy, and photomicrography, will be discussed. The work of many of the leading biological photographers and new materials and equipment will be on display.

The Biological Photographic Association, a non-profit organization, was formed in 1931 to raise the standards of photography in teaching and research, and to act as a clearing house for information on photographic methods. Its members are professional scientific photographers; scientists with an interest in photography as applied to their fields; and designers of precision equipment. The Association's Journal, published quarterly, is furnished free to members. Membership privileges include an authoritative question-and-answer service; also the right to borrow loan-albums and exhibits of scientific prints for study and display. Further information may be obtained by writing the Secretary of the Biological Photographic Association, University Office, Magee Hospital, Pittsburgh 13, Pa.

NEW YORK PSYCHOANALYTIC SOCIETY.—At the annual meeting May 21, 1946, the New York Psychoanalytic Society and the New York Psychoanalytic Institute elected the following officers for the year ending April 30, 1947.

Society: President, Dr. Philip R. Lehrman; Vice-President, Dr. Henry A. Bunker; Secretary, Dr. Emeline P. Hayward; Treasurer, Dr. Harry Weinstock.

Institute: President, Dr. Adolph Stern; Vice-President, Dr. Ruth Loveland; Secretary, Dr. Otto Isakower; Treasurer, Dr. Harry Weinstock.

THE SETON INSTITUTE.—Dr. C. H. Rogerson, formerly medical superintendent of Cassel Hospital at Swaylands, England, has been elected medical director of the Seton Institute at Baltimore, Md. The reorganization of Mount Hope Retreat, renamed the Seaton Institute, was reported in the November 1945 issue of the JOURNAL (p. 422).

There are several vacancies on the staff, especially for junior psychiatrists and for interns seeking training in psychiatry.

THE LANGLEY PORTER CLINIC REFRESHER COURSE.—The University of California Medical School announces a twelve weeks' refresher course in psychiatry and neurology, starting Monday, September 16, 1946 at the Langley Porter Clinic.

This course is a repetition of the one given last January, February and March, with minor changes. It is open to physicians generally and particularly to those returning from the armed forces. Registration is tentatively limited to 60, and the course will not be given for less than 25 applicants.

Instruction will be given under the direction of Dr. K. M. Bowman, professor of psychiatry, University of California Medical School, and will include all branches of psychiatry and related topics.

Registration is open to graduates of approved medical schools with nine months' general internship. Fee for the course will be \$200, payable in advance. Candidates registered under the provisions of the G.I. Bill of Rights will receive a refund prorated according to their terminal leave.

Immediate application for registration is recommended. It should contain the following information: (1) place of legal residence, (2) medical school attended and date of graduation, (3) experience and training in psychiatry, (4) short record of military service. Address applications to Stacy R. Mettier, M. D., Head of Post Graduate Instruction, Medical Center, University of California, San Francisco 22.

EXPANSION OF CHILD GUIDANCE CLINICS IN NEW YORK STATE.—The State Department of Mental Hygiene has announced a program of expansion of its child guidance clinics, made possible by a \$120,000 increase in the budget voted by the legislature.

Four clinic teams are already operating and seven more will be set up as soon as personnel becomes available.

Each team will be made up of a psychiatrist, a psychologist, two social workers and a stenographer. Teams now work out of central offices in Albany, Binghamton, Buffalo and Utica and provide service in 110 cities and towns throughout the state. New offices will be established in the Middletown, Ogdensburg and Syracuse areas and two additional teams in the Albany and Buffalo areas. The approximate number of clinics to be held monthly under the proposed program will be 350 as compared with 140 during the peak year of 1941.

A state wide survey of the work of existing clinics conducted in 1944 showed that after five years, in 1859 cases, 44.3 percent were adjusted, 8 percent were much improved and 27.3 percent improved. Primary behavior disorders were most frequent, and there was a 29.5 percent adjustment in this group, and a 59.1 percent adjustment in cases presenting social problems.

PSYCHIATRIC EDUCATION AT LONG ISLAND COLLEGE OF MEDICINE.—President Jean A. Curran has announced a substantial post-war expansion of the teaching and research programs in psychiatry at the Long Island College of Medicine. Nine additional psychiatrists have been appointed and the staff now includes 17 psychiatrists, one clinical psychologist and one social worker, who

serve under Dr. Howard W. Potter, clinical professor of psychiatry and head of the William Alanson White Memorial Clinic which has just completed its second full year under a six year grant from the Commonwealth Fund.

Instruction is now given to first year medical students and continues through the subsequent years of their course. The teaching program for the coming year will extend to 226 hours. Dr. Jules H. Masserman, assistant professor of psychiatry and research associate of the Sprague Memorial Institute at the University of Chicago, will join the staff in the autumn of 1946.

PSYCHIATRIC NURSING INSTITUTE.—The annual Psychiatric Nursing Institute under the combined auspices of the Rochester State, Syracuse Psychopathic and Willard State Hospitals (New York) was held at the Willard State Hospital June 11-12, 1946, with a total attendance of approximately 400 public health and nursing officials and others interested in psychiatry and its relation to the community.

Dr. Kenneth Keill, director, and Dr. James A. Brussel, assistant director, officiated as chairman on the first and second day respectively. The program included a wide range of topics of current psychiatric interest, discussed by prominent speakers. The occupational therapy departments of the three hospitals held an exhibit, as did the Macmillan Book Company.

PHILADELPHIA PSYCHOANALYTIC SOCIETY.—At its annual business meeting, June 15, 1946, the Philadelphia Psychoanalytic Society elected officers for the year as follows:

President: LeRoy M. A. Maeder, M. D.
Vice-President: George W. Smeltz, M. D.
Secretary-Treasurer: Robert S. Bookhammer, M. D.

Representative on the Executive Council, American Psychoanalytic Association, for a term of two years: LeRoy M. A. Maeder, M. D.

Representatives on the Board of Professional Standards, American Psychoanalytic Association: G. Henry Katz, M. D., George W. Smeltz, M. D.

Educational Committee: Chairman until June 1947: Sydney G. Biddle, M. D. Vice-Chairman until June 1947: LeRoy M. A. Maeder, M. D.

STUDENT SOCIAL WORK AIDES, NEW YORK.—Scholarships for study at accredited schools of social work have been awarded by the State Department of Mental Hygiene to eight college graduates of New York State. Commissioner MacCurdy states: "These young women, after three months of graduate study, will be the first student social work aides chosen by the Department as a part of an over-all program extending the social service work of the department beyond anything previously contemplated in the field."

According to this program, which is the direct result of a critical shortage of suitable personnel, four of the student aides will study during the summer at the New York School of Social Work, and four at the Smith College School for Social Work. In the fall the eight young women will begin carefully supervised work at upstate institutions of the State Department of Mental Hygiene. Each student aide has agreed to work in a state institution for at least one year. Also in the fall, the additional assignment of two student aides to the Fordham University School of Social Work is anticipated. At the end of a year, these students will be eligible for promotion and opportunities will be given them to continue their study while in the state service. Credit will be allowed by the schools for the work experience.

The recent increase throughout the state in the number of positions for psychiatric social workers is the basis of the thoroughgoing expansion of the program of the department which is planned to give more adequate care both to patients in the hospital and to convalescent and discharged patients.

PSYCHIATRY IN KOREA.—A meeting of Korean neuropsychiatrists was held at the Seoul University Medical School, June 11, 1946. Captain Milton M. Berger, M. C., Seventh Infantry Division psychiatrist, addressed the Korean doctors on "Recent Advances and Trends in Psychiatry and Neurology." After the formal meeting, re-

freshments were served and the subjects of Korean mysticism and superstition were discussed in open forum.

The Korean psychiatrists are greatly interested in developing a mental hygiene movement in Korea and are eager to learn of the work of colleagues in the United States and other countries. A plan to establish a Korean Psychiatric Association is being formulated.

The JOURNAL extends to the colleagues in Korea its congratulations and best wishes.

WAYNE UNIVERSITY COLLEGE OF MEDICINE.—Dean Hardy A. Kemp has announced an anonymous gift of \$90,000 to underwrite the expansion of the university's program in psychiatry for a period of five years. The donor indicated that prior to the end of the period the program will be reviewed to determine whether or not the grant should be continued. The funds will be administered through the Wayne University Foundation, a non-profit corporation founded to act as trustee for the receipt, management and disbursement of grants and gifts to the university.

Dr. John M. Dorsey, director of the Child Guidance Division of the Children's Fund of Michigan, has been appointed chairman of the department of psychiatry, on a full time basis, as from July 1, 1946. This will mean that the program can now be enlarged so that psychiatry may take its place as one of the major departments in medical education.

ELECTROSHOCK RESEARCH ASSOCIATION.—At the first official meeting of the Electroshock Research Association at the Palmer House Hotel, Chicago, May 27, 1946, a constitution and by-laws were adopted and officers elected. The secretary-treasurer reported progress on the development of standard statistical patterns for reporting results from shock therapy and in the collection of a library of reprints of the world literature on electroshock.

The officers are:

President, Victor E. Gonda, M. D., Chicago, Ill.

Vice-President, George T. Harding, M. D., Worthington, Ohio.

Sec'y-Treasurer, Paul H. Wilcox, M. D. Traverse City, Mich.

Councillors, R. Philip Sheets, M. D. Traverse City, Michigan. W. T. Liberson M. D., Hartford, Conn.

APPOINTMENTS TO N. Y. STATE DEPARTMENT OF MENTAL HYGIENE.—Three recent appointments to the central staff of the New York State Department of Mental Hygiene have been announced by Dr. Frederick MacCurdy, Commissioner. Miss Lillian V. Salsman who will fill the position of director of nursing services has held many important posts in nursing education. She will centralize for the first time the Department's nursing services. Miss Virginia Scullin who has been in the New York services since 1924 has been appointed director of occupational therapy and, as successor to Mrs Eleanor Clark Slagle, will direct and coordinate occupational therapy in all the institutions of the Department. Mr. Arthur Bradley, formerly recreation instructor at the Newark State School, will be responsible for the development of physical training activities in the various mental hygiene institutions.

NATIONAL INSTITUTE OF SOCIAL RELATIONS.—This new agency, organized early this year, has been incorporated in the District of Columbia as a non-profit educational organization. It has been set up by a group of former officers on the staff of the Surgeon General of the Army who, during the war, prepared the discussion material to assist the soldier to understand the issues of war. It is the purpose of the Institute to carry over this general plan into civilian service.

Discussion material dealing with vital issues of the day has been provided and an experimental study of the service is being conducted in 6 selected communities, with a full-time community worker in each city.

The Institute's board of consultants includes Mrs. Manchester Boddy, Mrs. J. B. Calkins, Col. Evans F. Carlson, Dr. Everett R. Clinchy, Mrs. LaFell Dickinson, Dr. Donald DuShane, Dr. Frank P. Graham, Dr. Mordecai W. Johnson, Miss Katharine Lenroot, Brig. General William Menninger,

—Mr. Philip Murray, Bishop G. Bromley Oxnam, Mr. Quentin Reynolds, Dr. Channing H. Tobias, Dr. George S. Stevenson, Mr. Walter F. Wanger, Mr. Frank L. Weil.

Information may be obtained from the national office, 1029 Seventeenth Street, N.W., Washington 6, D. C.

COURT PSYCHIATRIC CLINICS CONFERENCE.—A dinner was given by William H. Haines, M. D., Director of the Behavior Clinic of the Criminal Court of Cook County, at the University Club in Chicago, on May 27, 1946, at which were present the representatives of the various court clinics attending the American Psychiatric Association convention. The following clinics were represented:

Psychiatric Clinic, Court of Common Pleas, Cleveland, Ohio, by Royal G. Grossman, M. D., director.

Psychopathic Clinic of the Recorder's Court of Detroit, by L. W. Wiren, M. D., director.

Bellevue Psychiatric Hospital, New York, N. Y., by Morris Herman, M. D., assistant director.

Guidance Institute of Berks County, Reading, Pa., by Herbert H. Herskovitz, M. D., director.

Frank Curran, M. D., and S. Bernard Wortis, M. D., both of New York, and Lowell S. Selling, M. D., of Detroit, also were present because of their interest in court clinics.

The Psychiatric Institute of the Municipal Court of Chicago was represented by David B. Rotman, M. D., director, and his two assistants, T. J. Dulin, M. D., and Alex J. Arieff, M. D.

The Juvenile Court of Cook County was represented by J. R. Hora, M. D., director, and his assistant, Sam I. Stein, M. D.

The Behavior Clinic of the Criminal Court of Cook County was represented by William H. Haines, M. D., director, and Leo A. Kaplan, M. D., assistant director.

It is planned to hold similar dinner meetings at each meeting of the Association in order that the various court clinic staffs may become acquainted with each other and endeavor to work out their problems.

THIRD INTERNATIONAL CONGRESS OF ANTHROPOLOGICAL AND ETHNOLOGICAL SCIENCES.—The Permanent Council of the Congress, meeting in Oxford and London in April, 1946, voted to hold the next session of the Congress in Czechoslovakia in August, 1947. The last meeting of the Congress was held in Copenhagen in 1938. Invitations for the 1947 meeting had also been received from Portugal and Mexico.

THE AMERICAN COLLEGE OF PHYSICIANS announces its twenty-eighth annual session to be held in Chicago, Ill., April 28–May 2, 1947.

Dr. David P. Barr, New York, president of the College, will be in charge of the program of general sessions and lectures. Dr. LeRoy H. Sloan, Chicago, has been appointed general chairman, and will be in charge of the program of hospital clinics and panels, as well as local arrangements, entertainment, etc. Mr. Edward R. Loveland, executive secretary of the College, 4200 Pine Street, Philadelphia 4, will have charge of the general management of the session and the technical exhibits.

Other medical societies are urged to note these dates in order that conflicts in meeting dates may be avoided for mutual benefit.

NEW DIRECTORY OF PSYCHIATRIC CLINICS.—The new edition of the Directory is now available from the National Committee for National Hygiene, 1790 Broadway, New York 19, N. Y. Price 50 cents. It lists the 688 community clinics in the United States and also state institutions, state government departments promoting mental hygiene, Veterans Administration regional offices and hospitals, mental hygiene societies, family welfare societies, community welfare councils and veterans information centers.

Community Clinics in the United States (May, 1946) are listed as follows:

	Children only	Adults only	All-purpose	School children only	Court cases only	Veterans only	Restricted to agency clients	Total
Community clinics	67	22	174	16	5	12	14	310
Division of state or county government	193	12	141	9	18	..	..	373
Veterans administration ....	...	..	...	..	..	5	..	5
Total	260	34	315	25	23	17	14	688

THE NATIONAL COMMITTEE FOR MENTAL HYGIENE.—Dr. George S. Stevenson, medical director, announces that the 37th annual meeting of the National Committee for Mental Hygiene will be held at the Hotel Pennsylvania, New York, October 30 and 31, 1946.

A discussion of mental hospitals, citizen responsibility, and outlook for the future will be presented on Wednesday morning, October 30. The afternoon program will be focused on practice and prospects in combating Fascist ideology.

Medical practice from the mental hygiene standpoint will be the theme of the Thursday morning session, October 31. The Lasker Awards for "Most Significant Experimental Investigation into Behavior Deviations" and "Outstanding Contribution to Advancement and Improvement of Public Mental Hospitals" will be presented at the luncheon meeting. The afternoon session will consider Federal provisions and the development of state mental hygiene programs in relation to them, with special reference to the Mental Health Act of 1946.

**DIPLOMATES CERTIFIED BY THE AMERICAN BOARD OF PSYCHIATRY AND
NEUROLOGY, INC., CHICAGO, MAY 24 AND 25, 1946**

PSYCHIATRY

(By Examination)

Abel, Samuel E., Veterans Administration, Murfreesboro, Tenn.
Alston, James A., 305 Blackstone Blvd., Providence, R. I.
Austin, Florence O., Patton State Hospital, Patton, Calif.
Barasch, Julius, Harlem Valley State Hospital, Wingdale, N. Y.
Barta, Frank R. (Major), 462 Aguila Court, Omaha, Nebr.
Bartemeier, Lee Henry, 8-250 General Motors Bldg., Detroit, Mich.
Beall, Charles R. F., 618 Doctors Bldg., 478 Peachtree St., N. E., Atlanta, Ga.
Beck, Robert W., St. Mary's Hill, Milwaukee 4, Wis.
Bedinger, Ada D., Butler Hospital, Providence, R. I.
Berlien, Ivan C., 3128 Guardian Bldg., Detroit 26, Mich.
Blank, H. Robert, Mason General Hospital, Brentwood, N. Y.
Blaurock, Melvin F., 715 Lake St., Oak Park, Ill.
Bohnengel, Charles A., 340 Newbold Ave., Moorestown, N. Y.
Bourke, William W. (Major), Veterans Administration, Marion, Ind.
Bradley, John D., Duke Hospital, Durham, N. C.
Brown, Charles A. (Lt. Colonel), 168 High St., Perth Amboy, N. J.
Brown, William, 206½ W. 13th St., New York 11, N. Y.
Cane, Byron S., Hotel Burlington, Washington, D. C.
Carley, Walter A., Lowry Medical Arts Bldg., St. Paul 2, Minn.
Carroll, R. Charman, Duke Hospital, Durham, N. C.
Casey, Jesse F., Winter General Hospital, Veterans Administration, Topeka, Kans.
Cibelli, Louis A. (Major), Veterans Administration, Roanoke, Va.

Cleary, Louis F., U. S. Marine Hospital, Baltimore 11, Md.
Coleman, Jules V., 4200 E. 9th Ave., Denver 7, Colo.
Crank, Henry H., 3617 W. 6th St., Topeka, Kans.
Cromwell, J. O. (Lt. Colonel), 1021 E. 67th St., Inglewood, Calif.
Diamond, Leon S. (Captain), U. S. Veterans Hospital, American Lake, Wash.
Erickson, Clifford O., Pouch "A," Rochester, Minn.
Erps, Benjamin, Veterans Administration, Downey, Ill.
*Evans, Harrison S., 463 E. Town St., Columbus, Ohio.
Feldman, Edward G. (Captain), 4400 W. 16th St., Chicago, Ill.
Feldman, Raymond, Crest Hotel, 6724 S. Stonely Island Ave., Chicago, Ill.
Felix, Robert H., U. S. Public Health Service, Washington 14, D. C.
Fielding, Lewis J. (Major), c/o Mrs. J. R. Meyer, 1280 Ocean Ave., Brooklyn 30, N. Y.
Fife, William S., 1109 E. 4th St., Royal Oak, Mich.
Florio, William A., U. S. Army General Dispensary, Pentagon, Washington, D. C.
Gail, Irving A. (Captain), Veterans Administration, Lexington, Ky.
Gans, Robert W., Kennedy General Hospital, Memphis, Tenn.
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Gill, Morton M., 3617 W. 6th St., Topeka, Kans.
Glaser, Fritz, 7016 Euclid Ave., Cleveland, Ohio.
Gottesfeld, Benjamin H., 4 Vernon St., Hartford 6, Conn.
Graves, Charles C., Jr., State Hospital, Marlboro, N. J.
Grimes, Burton P., State Hospital, St. Peter, Minn.
Gronner, Robert, 55 E. Washington St., Chicago 2, Ill.
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Harris, William L., Kings Park State Hospital, Kings Park, L. I., N. Y.

*Denotes complementary certification.

- Haun, Paul, 1104 Vermont Ave., N.W., Washington, D. C.
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- Hepburn, Charles K., 524 Hume-Mansur Bldg., Indianapolis, Ind.
- Hoagland, Thomas V., Ypsilanti State Hospital, Ypsilanti, Mich.
- Isenberg, Morris (Captain), Medical Branch Separation Center, Jefferson Barracks, Mo.
- Juracek, Valeria R., University Hospital, Ann Arbor, Mich.
- Kagwa, Benjamin H., 6306 Cottage Grove, Chicago, Ill.
- Kells, Paul, 307 N. E. 95th St., Miami 38, Fla.
- Kraus, Albert (Captain), Rehabilitation Center, Chicago, Ill.
- Krug-Brady, Othilda, Cincinnati General Hospital, Cincinnati 29, Ohio.
- Landis, Edward E., 7 Hawthorne Hill, Louisville 3, Ky.
- Leonard, Charles E., 1212 Medical Arts Bldg., Oklahoma City, Okla.
- Levine, Harold N., 5304 32nd Ave., Woodside, L. I., N. Y.
- Levingston, Anne G., Metropolitan State Hospital, Waltham, Mass.
- Levitin, David, Suite 1128-30 N. Michigan Ave., Chicago, Ill.
- Lidz, Theodore, John Hopkins Hospital, Baltimore, Md.
- Lowry, James V., U. S. Public Health Service Hospital, Lexington, Ky.
- Luidens, Henry (Lt. Colonel) 282 S. Roys Ave., Columbus, Ohio.
- Mace, Norman C. (Major), Veterans Administration Hospital, Mendota, Wis.
- Mallin, Aaron W. (Captain), 2164 N. Marston St., Philadelphia 21, Pa.
- Marks, Ben, 902 Industrial Bank Bldg., Detroit 26, Mich.
- Mason, Aaron S. (Major), Veterans Administration, Downey, Ill.
- Meller, Robert L., 1541 Medical Arts Bldg., Minneapolis, Minn.
- Menninger, William C. (Brig. General), Rm. 2-E316 Pentagon, Surgeon General's Office, Washington, D. C.
- *Meyersburg, Herman A. (Lieut.), U. S. N., T. & D. C., Camp Peary, Va.
- Moore, Donald F., Box "A," Ypsilanti, Mich.
- Morris, Donald P., Southwestern Medical College, 2211 Oaklawn Ave., Dallas 4, Texas.
- Norfray, Raymond J., 6 N. Michigan Ave., Chicago, Ill.
- Norman, Jacob P., Foxboro State Hospital, Foxboro, Mass.
- Orr, Douglass W., 1116 Spring Ave., Seattle 4, Wash.
- Parsons, Ernest H. (Colonel), Brooke General Hospital, Ft. Sam Houston, Texas.
- Paster, Samuel, Kennedy General Hospital, Memphis, Tenn.
- Peal, Stanley, Sheppard & Enoch Pratt Hospital, Towson 4, Md.
- Pignataro, Frank P., New Jersey State Hospital, Marlboro, N. J.
- Pike, William W., Rockland State Hospital, Orangeburg, N. Y.
- Polan, Simon (Major), Veterans Hospital, Oteen, N. C.
- * Denotes complementary certification.
- Portnoy, Isidore, 74 W. 68th St., New York 23, N. Y.
- Post, Edward S., Veterans Administration Hospital, Marion, Ind.
- Rapoport, Jack, 25 W. 54th St., New York, N. Y.
- Rappa, James E., 681 Clarkson Ave., Brooklyn, N. Y.
- Reader, Donald R., W. D. P. C., Medical Branch, Ft. Snelling 11, Minn.
- Robbins, Lewis L. (Major), The Menninger Clinic, Topeka, Kans.
- Rodis, Isadore, 1725 Eye St., N.W., Washington 6, D. C.
- Rosen, Samuel R. (Captain), 78-14 Austin St., Forest Hills, N. Y.
- Schmidhofer, Ernest, 1026 Wilson Ave., Chicago 40, Ill.
- Senseman, Laurence A., 160 Chapel St., Saylesville, R. I.
- Simonson, Melvin, Veterans Administration, Downey, North Chicago, Ill.
- Smith, Beverley E. (Lt. Colonel), Valley Forge General Hospital, Phoenixville, Pa.
- Straker, Manuel (Captain), Ste. Annes Hospital, Ste. Anne de Bellevue, P. Q.
- Sullivan, Joseph D., 300 E. Tremont Ave., New York, N. Y.
- Sutherland, George F. (Major), Crile General Hospital, Cleveland 9, Ohio.
- Tarlow, Virginia S., 30 N. Michigan Ave., Chicago, Ill.
- Tatum, Joseph C. (Lt. Colonel), Veterans Administration Hospital, Downey, Ill.
- Timm, Oron K., Veterans Administration Hospital, Ft. Custer, Mich.
- Trawick, John D., Jr., U. S. Naval Hospital, Bethesda, Md.
- Wade, Chester, Rogers Memorial Sanitarium, Oconomowoc, Wis.
- Wallner, Julius M., 1313 E. Ann Street, Ann Arbor, Mich.
- Walzer, Joseph, 53 Leroy St., New York City.
- Weisdorf, Wm., 3105 Wavansia Ave., Chicago 47, Ill.
- Whitaker, C. A., Oak Ridge Hospital, Oak Ridge, Tenn.

NEUROLOGY

(By Examination)

- Garvey, John L., 208 E. Wisconsin Ave., Milwaukee, Wis.
- Kohut, Heinz, 950 E. 59th St., Chicago 37, Ill.
- Lambros, Vasilios S., 7720 14th St., N.W., Washington 12, D. C.

Sweet, William H., Massachusetts General Hospital, Boston 14, Mass.
 Zimmerman, Joseph, 118 Eighth Ave., Brooklyn 15, N. Y.

PSYCHIATRY AND NEUROLOGY
 (By Examination)

Badal, Daniel W., University Hospitals, Cleveland 6, Ohio.
 Brown, Joe R., Department of Neurology, University of Minnesota Hospitals, Minneapolis 14, Minn.
 Chambers, Rawley E., Fitzsimmons General Hospital, Denver, Colo.
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BOOK REVIEWS

WILL THERAPY AND TRUTH AND REALITY. By Otto Rank. Translated with three introductions by Jessie Taft. (New York: Alfred A. Knopf, 1945.)

As I finished reading this book the following thoughts ran through my mind; "That's what one must expect when medically untrained individuals venture into the art of healing." "Dr. Otto Rank" was not an M. D., as one might think looking at his picture on the inside of the fly leaf. I have known him well throughout his psychoanalytic career and have first hand knowledge of the factors that led to his defection from Freud. For about sixteen years, Rank was an active worker in the psychoanalytic movement; he made excellent contributions to some phases of psychoanalysis but he became thoroughly muddled soon after he began to delve in analytic therapy.

Rank was the first and most outstanding of Freud's lay pupils. Like Saks and others he was attracted to Freud's views after reading the "Interpretation of Dreams," and, as he was primarily interested in art, his first psychoanalytic production was a treatise on "The Artist" (*Der Künstler*) which he submitted in manuscript form to Freud. The latter was greatly impressed by his talent, and as Rank was a poor student, Freud took him under his wing and helped him to obtain his Ph. D. by appointing him paid secretary of the Vienna Psychoanalytic Society. Rank's most important work, in my opinion, was "Das Inzest-Motiv in Dichtung und Sage," (*The Incest-motive in Literature and Legend*), which he gratefully dedicated to his highly revered teacher, Sigmund Freud. This was the first important work that opened new vistas in mythology, folklore and literature. He wrote a number of other notable works, alone and in collaboration with others, until 1923, when he published "Das Trauma der Geburt" (*The Trauma of Birth*), in which he delved deeply into the therapy of the neuroses, for which he was neither fit by training nor temperament. Freud disagreed with his views, and this started the imbroglio which ended in Rank's branching out as a therapist, philosopher and what not.

Having been more than an onlooker in this affair, and though fully agreeing with Freud on therapeutic grounds, I was not altogether unsympathetic to Rank. I shall briefly sketch my version of the situation.

After the first world war, Freud, like every Austrian, was impoverished. Those of us who lived in allied countries therefore, took it upon ourselves to send patients and students to Freud, for that was the only help he was willing to accept from his sympathetic friends. As his Vienna pupils were all in dire need (I know that Rank was one of them), Freud sent the surplus of his patients to his medical co-workers, and then decided to do the same

for his lay pupils. That started the question of lay-analysis which later gave rise to so many controversies. Freud's original idea was that the lay-analysts should work under the supervision of physicians—the whole problem was fully discussed in a very interesting work to which the reviewer wrote a long reply.¹ There was no question that some of Freud's lay pupils were thoroughly versed in didactic analysis, but Freud's sympathy blinded him to the fact that to treat patients requires more than mere theoretical knowledge. Rank was certainly well versed in the theory of psychoanalysis, but Freud ignored the fact that Rank was subject to emotional fluctuations and that a knowledge of its theories does not prevent the disease. Having started to treat patients, Rank soon promulgated all sorts of wild theories which finally led to his separation from Freud and psychoanalysis.

To return to the review of this book. We gather from the Foreword that it is a combination of two of Rank's works: "Will Therapy," and "Truth and Reality." The translator, Miss Jessie Taft, states in the Foreword that "It is important that these two books which are basic to an understanding of Rank's psychology and therapeutic method should remain available to students in schools of psychiatry and social work." I do not share this opinion. I find nothing in this book that is of any value to any student in schools of psychiatry. The "Foreword" is followed by the "Translator's Preface," and this is followed by the "Translator's Introduction," in all of which Miss Taft is doing her best to guide the reader through the chaos that pervades this work. That a book of about 300 pages should require three introductions is in itself an indication of a fundamental debility. I read the original works, fragments of which compose this work, and I am sure I am not the only one who found it hard to follow the author. The English work, which though well translated, is just as difficult to read.

The book consists of three parts: Will Therapy, Part One, which runs to Chapter IX, and Will Therapy, Part Two, which runs to Chapter XV, and Truth and Reality which consists of seven chapters. Each part and each chapter start with quotations from such authorities as Kant, Oscar Wilde, Pindar, Persius, Browning, Nietzsche, Paracelsus and others. If we have the right to consider such quotations as *Leitmotifs* of the author's stream of thought—and I feel we have—they are interesting indications of the author's befuddled state of mind. In brief, this book is a hodge-podge of ideas, which taken individually are quite interesting, but are quite incomprehensible as a coherent whole of a

¹ Brill: The Question of Lay Analysis (*Die Frage der Laienanalyse*) Journal of Nervous and Mental Disease, April 1927.

treatise on "Will Therapy," and "Truth and Reality."

A. A. BRILL, M.D.
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HUMAN CONSTITUTION IN CLINICAL MEDICINE. By
G. Draper, C. W. Dupertuis, and J. L. Caughey,
Jr. (New York: Paul B. Hoeber Inc., 1944.)

In 1916 George Draper noted that child victims of an epidemic of infantile paralysis possessed certain similar identifying qualities of physical form and general personality. A long series of carefully recorded observations made since that time by Draper and his colleagues on patients with many diseases provides the material presented in this interesting and valuable book. The authors emphasize the essential relationship between each individual in his totality and his disease or disorders. It is pointed out that there is a clear resemblance in kind between the complete living person and each cell of his various systems and that, in other words, "no two stomachs or intestines, and no two hearts, or livers, react similarly to any ingested food or poison or emotion." An attempt is made to correlate the detailed observations on morphological, physiological and psychological characteristics of different groups of patients and point out the relationship of this total constitution to their diseases.

The chapter on "History-Taking" might well be read by every medical student and every student-doctor.

The sections devoted to anthropometry present interesting data on patients suffering from pernicious anaemia, acute rheumatic fever, gastric and duodenal ulcer, hypertrophy of the prostate, gall bladder disease, migraine, toxæmias of pregnancy and carcinoma of the uterus, etc. It is pointed out clearly that the characteristic constitution frequently associated with definite diseases is based on the general trend of the whole group. For instance "all gastric ulcer patients are not long and thin, but our observations of peptic ulcer and gall bladder patients lead us to believe that at least 75 per cent show distinctive bodily characteristics." The overlapping or mixing of hereditary characteristics is obviously important and reduces the value of such measurements in dealing with individual cases.

Under the heading, "Mosaic of Androgyny," is an interesting chapter describing extra-genital sex differences. Attention is drawn to the differential sex incidence of a number of diseases, varying from gout and Marie-Strumpell spondylitis with male incidences of 98 per cent and 91 per cent respectively to carcinoma of the gall bladder and hyperthyroidism with a female incidence of 91 per cent.

There are interesting chapters on such fields as genetics, growth and development, constitutional physiology and clinical use of constitution studies.

In a final chapter the importance of recognition of the unity of the organism is again emphasized. After an earlier period of "scientific medicine" the rediscovery of the psyche as an integral part of the

patient has led "to a supposedly new kind of medicine, at this moment qualified by the term psychosomatic." Ever since the biologists applied the organismal concept of man, however, "medicine has needed no further qualification. It remains simply Medicine."

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NATIONAL HEALTH AGENCIES. *A Survey with Especial Reference to Voluntary Associations.*
By Harold M. Cavins. (Washington: Public Affairs Press, 1945.)

This book is much more than a directory. The last two hundred pages are devoted to descriptive statements of some eighty-two foundations, membership agencies and promotional agencies more or less in the health field. They show how the specific activity came into being, forces that were behind it, the stages involved in its growth, present organization and function. Of course, taken together, it gives us something of a picture of the social mind of America and, as is pointed out by the author, we have here a discussion of an instrument that is peculiarly American. The first thirty-five pages as a matter of fact are devoted to an interpretation of the evolution of the health agency as an expression of a democratic process of meeting social needs. Some of the stories of these agencies show rather clearly how the altruistic interest of a private citizen has led him to seek out and discover other persons with similar interests and form a partnership in the promotion of these interests. One gets the feeling that we have in this process an immense force that should not be lost sight of and that perhaps is lost at times when the principle of a rotating board is adhered to too strongly.

One group of stories deals with the professional membership agency and shows how it evolves from a conclave of professional persons who are exchanging experience, often into an agency that is not too distinguishable from the promotional agency referred to above. A third group of agencies includes the foundations and shows how extensively these have cut across and supported the activities of the professional membership and promotional voluntary health agencies.

The American Psychiatric Association is selected as one of the four membership associations, and among these four is given the first place in the volume. The content of the five pages of *description* is of course not new material, standard sources having been called upon for information. This also applies to The National Committee for Mental Hygiene which is presented as one of the ten voluntary promotional or educational agencies.

An introduction by Reginald M. Atwater of the American Public Health Association gives a good perspective on the volume and ties it in with a prospective report, "Voluntary Health Agencies," an interpretative study to be issued shortly by the National Health Council.

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MEN UNDER STRESS. By Roy R. Grinker, Lt. Col., M. C., and John P. Spiegel, Major, M. C. (*Army Air Forces*). Philadelphia: Blakiston, 1945.

A medical monograph may be judged under three main headings: (1) the impression which it evokes as a work of literature; (2) the aptness and authenticity of the clinical description, as well as the validity of the therapy which is recommended and used; and (3) the theory which underlies the description and the conclusions, and is set forth as the working hypothesis.

This volume, "Men Under Stress," makes the finest of impressions. It is a distinguished book, both in format and in the essential brilliancy of its English. From the classical beginning wherein the flying man is linked to his great prototype, Icarus, to the solemn warning in the final paragraphs of the book, there is nothing lacking, and there is everything which such a book should have. There are descriptions justifiably to be described as classical, because there is a living mixture of fine emotion, calm objectivity and keen insight, a combination which represents an ideal in the semantics of psychiatry. The language is always plain and frequently bold. It pulls no punches, and yet it is subtle with an underlying irony and, I believe, is always permeated by a wholehearted sympathy for the sufferings and trials which the "men under stress" have undergone. There are descriptions of the ordeals of training, the flight, the battle, the tedious waiting, the harassed sleep, the monotony of diet—in short, the acute suffering and the tedium *vitalis*, which can only be designated as splendid. The authors have lived with these men. They have suffered with them, at least vicariously. They have, to use their own phrase, been able to "identify" themselves with them. This identification, although it is a term I do not particularly like, has enabled them to portray one of the most poignant phases of modern warfare. The men are real. They are flesh and blood and bowels. They are barraged by conflicting motives. And the stress of their lives has a three-dimensional depiction, which can only mean that the authors are gifted with the capacity to see into other men's lives and to portray most adequately what they see.

Turning to the second phase of this review: The clinical descriptions are excellent. Anxiety—free and fixed—stands out in the lives of these men and is described tersely and adequately. The different types of men are separated. The normal man who breaks down under undue stress is not merged with the sufferer who has shown his weaknesses throughout his life, and for whom the anxiety state into which he is plunged during his air service is merely the culmination of a psychiatric career. The imaginative man, whose gift for feeling becomes a double-edge sword which lacerates him, is not confused with the psychopath who finds it difficult to accept authority under conditions where his egoism is obstructed and his inability to cooperate brought out into sharp relief by the military necessities. The soft mother's boy, who has under a mistaken idealism taken up the most arduous of

military work, is sympathetically described; but so is the tough guy, whose dissociation from terra firma, the death of his comrades, the peril of the flak which rises up as a winged instrument of destruction, and the growing certainty that sooner or later if he flies enough he, too, will be among the missing or the dead, all of which break down his cohesion into the neurosis which the authors clearly describe.

The effect of poor food, disturbed sleep, physical hardship, and the tensions of conflict and fear are described in terms to which anyone can agree, no matter what his underlying philosophy of psychiatry may be. There is an especially fine description of the neurology and physiology of action, motion, sensation, mood, and feeling-tone, which should be separated out from the book and published as a synopsis of our present-day knowledge. The authors state that it is very likely that more refined clinical diagnostic methods and subtler metabolic methods would reveal physiological mechanisms behind the anxiety, the neurosis and the breakdown. The reviewer is particularly sympathetic with this viewpoint and can only praise and admire the physiological and neurological knowledge which thus comes forth.

The use of sodium pentothal and its startling effect in producing hidden psychological material is stressed. The process by which the individual is very simply restored to something like normalcy is called "narcosynthesis" and is the subject of a previous monograph by one of the authors. The same process, or a very similar one, was called "narco-analysis" by the British, and I regret that not enough credit has been given to Erich Lindemann whose classic work on sodium amytal is really the basis of much of the recent pharmacodynamic studies. His name is not even mentioned in the text although it appears in the index. Whether the therapeutic process is narcosynthesis or narco-analysis, it is definitely at least treatment by a drug, a barbiturate, one of the blessed family of drugs which gives fine results in the treatment of mental disorders to those who know how to use them. The results are attributed more to the so-called synthesis than to the drug. I believe from my own experience that the reverse is true; that the "cure" of acute amnesias, hysterias and other stress-induced states depends on the narcosis which, after all, is an old treatment in the history of psychiatry. The "synthesis" is dramatic, but I doubt its necessity.

When we turn to the long and brilliant chapters on psychodynamics, the reviewer must pause in his praise of this book. Psychoanalytic concepts govern, yet nothing in the book itself indicates that any psychoanalysis has been done in these cases and, in fact, the authors state that no such procedure was followed. *A priori* judgments govern the discussion of the psychodynamics. It is refreshingly true that one can read this book and find nothing of the Oedipus complex, penis envy, castration fear; and all the various formulæ of oral, anal and other eroticism are either conspicuously absent or tentatively introduced. The Ego and the Superego are shuffled around as if they

were separate and clearly defined structures, but I miss that feral primitive, the Id; he has been lost in the shuffle. The old psychoanalysis has disappeared though now and then the integrated habit of thought of the writers comes out as, for example, when they state that the American soldier loves milk because of maternal linkage. This hardly explains why he also likes beer and cigarettes, and why he seeks night-clubs when he returns home. He likes milk because it is a very fine drink, one that he has been trained to think of as the best of fluids so far as calories and vitamins are concerned. He has no more maternal fixation than the men of those countries in which wine or beer take the place of milk as a beverage.

This same trend appears when the authors discuss the constant use by the soldiers of a certain four-letter word, which represents the solid excrement, and from which the authors deduce, rather fantastically, a gastrointestinal anal libido. This excrement is really rather disgusting. Its smell is disagreeable. One can slip in it. Even dogs go through a ritual of covering it over, and apes and monkeys—so we are told by the zoologists—change their nests and their places of abode when s.t. accumulates. In fact, the word is an appropriate symbol of disgust, and disgust is a constant emotional phase of military life. I doubt if it has a deep personal psychological significance. In reality, its use is part of the mores.

I am not convinced by the use of the term "identification," especially where it is stated, time and again, that the leader of an outfit, the pilot, is identified with the father. I think here that the common, let us say, vulgar error of a good deal of psychoanalysis becomes exposed in its nakedness. Things which are similar to one another become identical. The leader of a group is similar in some respects to the father. That does not make leadership and fatherhood the same by a long road of differences. I have spoken to many airmen, pilots and non-pilots. If the crew trust their leader, the pilot, they feel happy because, after all, their lives are in his hands. One might as well identify the engineer of a train with the father, since the passengers trust him. They may hate his guts if he is overbearing, conceited, unjust, too superior, incompetent and for a thousand and one personal reasons. Generally, the pilot is the contemporary of the rest of his crew in age. If he is a good leader, well and good. If he is not, then dissension, disunion and anxiety naturally appear together with hatred. But he is not a provider. He has not rocked them to sleep when they were babies. He has not been the man who lived with their mothers. The identification does not exist and should not. Identification with the group is a good enough term, but I fail to see where it is any better than the term cooperativeness or group solidarity. This is not mere etymological hair-splitting. Identification has come to have a special meaning of psychoanalytic implication. Group solidarity is the aim of morale-building. It is increased by trust, mutual aims, mutual hatred and good leadership. It is destroyed by distrust, conflicting aims, such as involved in the terms jealousy and rivalry, inability to

cooperate, bitterness and poor leadership. All these are stressed in this excellent book when the discussion remains on what I call, without any adverse implications, a commonsense level. It loses its validity, so far as one reader is concerned, when the term identification is used.

And I am rather weary of the psychiatric cliché "regression." If this merely means that a person of one level of cohesion and physiological and psychological integrity is reduced to a lower level, the term is good enough. This is the kind of thing which takes place in the organic diseases as well as in the functional. But when the term regression carries with it the regression to childhood, then I object in the name of childhood. Again the fallacy of making identities of things which have some similarities reappears and illogically. For childhood may have dependence, but it is keenly inquisitive, highly energetic. It is expanding, growing, palpitating with life and vigor. The "regressing" person as he moves downward may show some of the emotionality and immaturity of childhood. In general, he is a totally different person from a child. He is a sick adult, and he is as different from a normal healthy child as he can be. It is, I believe, by an artefact of analysis that he is discovered to have gone back to childhood complexes. The sick man, whether he have an anxiety neurosis, hysteria, or what-you-will of the numerous and merging mental disorders by which man is afflicted, shows disintegration, disharmony of function, and imbalance—physically and mentally. He is not so much at a lower level of integration and energy, as he is at a disordered level. Certainly, he cannot be compared to the healthy child without a distortion both of his state and that of the child.

Theory ceases to be important in the discussion of a book like "Men Under Stress." It really does not matter what the psychoanalytic or other theory may be behind the work which is represented by this book. The authors have worked on and for their patients not as psychoanalysts or psychotherapists, but as doctors of medicine. They have utilized rest and physiotherapy of all kinds. They have set in motion physical and psychological recuperative agencies. They have used drugs. They have explained, consoled, bolstered and disciplined into integrity sick men, men who have undergone grave and disorganizing stress.

It is an under-statement to say that this book should be in every psychiatrist's library. To those who have not read and digested it, I say they have missed an enriching experience.

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THE 1945 YEAR BOOK OF NEUROLOGY, PSYCHIATRY AND ENDOCRINOLOGY. Edited by *Hans H. Ruse, M. D.* and *Mabel G. Masten, M. D.* (Neurology); *Nolan D. C. Lewis, M. D.* (Psychiatry); *Elmer L. Sevringhaus, M. D.* (Endocrinology) (Chicago: The Year Book Publishers. 1946.)

The initial item in the 1945 edition of the Year Book is a dedication by the authors of the section

on neurology to Dr. Peter Bassoe, the first editor, who died Nov. 5, 1945. Dr. Bassoe's portrait appears as frontispiece.

Another major loss to medicine during the year is recorded in the death, Oct. 1, 1945, of Walter B. Cannon, whose work was especially important for neurology in the field of autonomic physiology.

The editors have sought by careful selection and, as far as possible, with critical comment or evaluation to present the important experimental studies as well as clinical observations for the benefit particularly of teachers and practicing clinicians. As an example of reporting they discuss Wartenberg's "Studies in Reflexes," a series of articles that appeared first in the *Archives of Neurology and Psychiatry*, and later as a handbook. This is a valuable source book containing a description of all the reflexes with simplified terminology. A detailed criticism of the book by Marion Hines is quoted to the effect that the author does not discuss the anatomy and physiology of reflex arcs, as would have been very helpful, and fails to do justice to the interpretation of the phenomena he describes.

Especial attention is called to recent studies on epilepsy and the newer drug treatments, particularly of petit mal and allied types. The importance of education for patient, physician and public alike as to the status, and proper management of the convulsive disorders is stressed. Recent and continuing investigations have vastly improved the outlook for patients suffering from these conditions.

There are numerous reports on cerebral and meningeal infections and the use of the sulfa drugs and penicillin. The present status of the penicillin treatment of neurosyphilis: "success in the immediate amelioration of symptoms and also in serologic improvement. Follow-up studies necessary."

Nolan Lewis, in the section on psychiatry, comments: "The sooner a real understanding is reached between internal medicine and psychiatry, the more rapid will be the progress of medical science. In medicine the mind has always been deemed important theoretically, but in most instances it has been left out of consideration or given a minor significance when bodily diseases have been under practical therapeutic consideration."

Emphasized is the extraordinary part of psychiatry in military medicine in World War II, and the mass of evidence it has furnished relating to the effects of emotional states on bodily functions.

Further evaluations of the shock therapies are being recorded. A special division is devoted to articles on child psychiatry; another longer one to neurotic and psychosomatic reactions; and a final division deals with military psychiatry.

As Sevringhaus edits the section on endocrinology for the last time in the present Year Book, he outlines briefly the status of the subject when the section first appeared in the Year Book in 1934 as compared with today. The fundamental concepts of twelve years ago remain. These include the relationships of the anterior pituitary as a "master gland," and the "dynamic balance" theory to explain the so-called "polyglandular syndromes" that has thrown additional light on the etiology of diabetes mellitus.

Among the advances of the period are better understanding of the mechanisms of the menstrual cycle, the discovery and application of synthetic estrogenic compounds, adrenal cortex studies that have contributed vitally to the treatment of Addison's disease, and the use of thiouracil for relieving thyrotoxic status.

"The question of whether to relate the endocrine system to the nervous system or to nutrition can be answered only by stating that both relationships are important but that the endocrine organs are really related to the entire body and to virtually all physiology."

There is some improvement in world literature coverage in the 1945 Year Book as some of the foreign journals are again becoming accessible; and the volume upholds the high standard of reviewing and editing that has been maintained through the years.

C. B. F.

WAR NEUROSES. By Roy R. Grinker, M.D., and John P. Spiegel, M.D. (Phila.: Blakiston Company, 1945.)

This volume is a revision of an earlier publication written at the end of the Tunisian campaign, and brought out during the war for the restricted use of medical officers. As such it served an admirable purpose in bringing to this group an accurate description of the various types of the war neuroses that they were to encounter. In addition, it furnished a rational and dynamic approach to the understanding of the psychodynamics of these conditions. Above all, it stressed sound therapeutic principles which emphasized regard for the individual patient and for the psychological mechanisms involved in his illness, and focused attention on the value of "uncovering" techniques.

The case histories are well chosen and accurately depict the common types of war neuroses. One misses data in regard to the relative incidence of the various types of cases, an omission which may give rise to the impression that the dramatic and severe anxiety states were more frequent than was actually the case. Throughout the volume indeed, the lack of important statistical data is disturbing. One cannot agree with the authors that statistics regarding psychiatric casualties of war can have little significance (p. 3). With complete and qualifying information accompanying the figures, much can be learned from such compilations.

The book suffers somewhat from the limited viewpoint of the authors, who saw cases from one short and victorious campaign only, and in relation to the front, in one installation only. In view of their correct appraisal of the importance of giving the site of psychiatric observations during war, it is unfortunate that there was omitted a definite statement as to their geographic location at the time this work was done.

The psychosomatic disturbances, found to be so important in later experiences in the war, might have been given greater emphasis. Also their discussion of the depressed states is inadequate. Such cases became extremely common in divisions with

long combat records. The moot question of blast concussion is admirably handled. The more effective dissemination of the authors' point of view especially to medical officers prior to entering combat, might have prevented many erroneous diagnoses of blast concussion in cases with pure anxiety states.

The opinions expressed in regard to exhaustion states reflect those current among psychiatrists active in forward areas during the Tunisian campaign. Later experience showed clearly that exhaustion *per se* is almost never the cause of neurotic breakdown in combat. The authors' "exhaustion states" were later classified as anxiety states, but the important point is that follow-up studies demonstrated that early treatment interrupted the progress of the disorder, and that such soldiers could function effectively when returned to combat duty.

In their discussion of etiologic factors the error is made of drawing conclusions from case material alone. For example, no valid conclusion can be reached concerning the question of the vulnerability to neurotic breakdown in combat of various personality types unless accurate data are also collected from groups of soldiers who were exposed to combat but did not break down. Although more fully discussed in a later section, this chapter should have given more weight to the very important factor of lack of motivation and orientation among our troops as an etiologic agent.

The chapter on therapy is one of the best in the book. Both the discussions on narcosynthesis and psychotherapy are excellent. This reviewer is in accord with the authors' rejection of continuous sleep therapy. The method has failed to prove efficacious in other hands also, and in addition readily lends itself to the routinization which leads to neglect of the individual patient and his psychological problems.

The omission of a statement of the proportion of cases treated with narcosynthesis is unfortunate. In the experience of others, working in forward areas, only from five to ten percent of the total cases seen were found, by the criteria given by the authors, to be suitable for this type of therapy. The absence of these data may have been responsible in part for the over-enthusiasm for the method now current, following the appearance of the earlier publication. One must also point out that the success achieved by the authors was due in no small measure to the fact that they were extremely skillful therapists with a profound grasp of psychodynamics. A word of caution as to the possible dangers of this method in unskilled hands would have been valuable. Narcosynthesis is a method which must be learned, which has definite indications, and which should be used by the untrained only in the presence of competent supervision.

Group therapy, with which the authors had little experience, found wide application later in the war. While the outline for a therapeutic regimen as given in this book is an excellent one, it is doubtful if it could be fully achieved in most overseas hospitals during the war, due to the enormous case loads imposed upon each psychiatrist. In conse-

quence, "second best" methods of which group techniques was one, had to be used.

The last sentence of this chapter expresses excellently the essence of any practical and rational therapy for these casualties overseas: "For the soldier, return to work is the best therapy—counteracting his dependent trends, bolstering his ego-ideal, and permitting him to return home with the army, and not as a crippled failure." Later experiences by other psychiatrists have amply confirmed the truth of this statement.

In the final chapter the account of the psychological factors important in psychodynamics is in accord with most observations, but the section on "physiological mechanisms" is speculative and in need of confirmation. Other experiences have shed some doubt on the opinions of the authors as to the mode of action of barbiturates in narcosynthesis. Grinker and Spiegel have stressed some of the physiological effects of these drugs in the process, and have denied that the effects might have been due simply to chemically induced hypnosis. Others have found that the described effects could be produced by the use of very small amounts of drug, with suggestion, while still others achieved the self-same results with hypnosis alone. The authors' points of view need much further confirmation before they can be accepted generally.

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NEW GOALS FOR OLD AGE. Edited by George Lawton (New York: Columbia University Press, 1943.)

This book is composed of a series of papers by different authors. There is considerable variation in the value of the various chapters and some lack of continuity. Three chapters seem to the reviewer as worthy of special mention: "Ageing Mental Ability and Their Preservation" by George Lawton, "The Older Person in the Changing Social Scene" by Lawrence K. Frank, and "Physical Changes in Old Age and Their Effects Upon Mental Attitudes" by the late Llewellys Barker.

Lawrence K. Frank points out "until recently we have been inclined to think of health and sanity as something that was mysteriously lost, but today we are beginning to realize that health and sanity must be achieved by meeting the tasks of life more adequately, courageously and effectively." He also points out that many individuals can find escape from their problems by keeping occupied at their daily work. When, however, they retire, these problems loom up much more seriously and the individual is unable to deal with them. He concludes that retirement is not the solution for most older persons; that they do not want idleness and freedom "but an opportunity to do something with their lives that will make them significant."

The chapter by Llewellys K. Barker will be of particular interest to those who knew him personally and saw how he exemplified the proper mental hygiene for older persons. Dr. Barker was

74 at the time he wrote this chapter and died while the proofs of the book were being read.

Barker recommends that on reaching middle age persons should plan their lives so that there will be a gradual adaptation to the ageing process rather than a postponement of such changes and then be forced suddenly and without preparation to adapt to new and trying situations. He has many practical suggestions for making old age a happier experience. He advocates a southern climate in winter, suggesting a northern climate in the summers, but apparently not considering certain parts of the country where a rather equable climate prevails throughout the year.

For insomnia he suggests a glass of hot milk or a little whiskey; he prefers alcohol as a hypnotic to bromides and barbiturates. He also discusses diet, giving one which he personally used. There is also emphasis on the notional attitude which one should adapt to the ageing process.

On the whole the book is an excellent contribution to the subject. It is clearly and simply written and can be understood by the average intelligent lay reader. On the other hand, the experienced psychiatrist will find much of value in it. It is a book, therefore, that can be recommended to all groups for general reading.

K. M. B.

A HANDBOOK OF PSYCHIATRY. By *Louis J. Karnosh, M.D., and Edward M. Zucker, M.D.* (St. Louis: C. V. Mosby Co. 1945.)

The growing appreciation of psychiatry among the members of the medical profession generally and increasing recognition of it as a proper subject for inclusion in the undergraduate curriculum has resulted in the production of a number of small texts. Such books considering the groups for which they are intended have a legitimate place in medical literature. They, with varying fortunes, attempt to supply the fundamentals of psychiatric knowledge. The general practitioner who desires some acquaintance with the psychiatric problems which he is certain to meet and the medical student gaining similar elementary knowledge, do not desire large books with much inclusion of highly specialized material. For these the handbooks meet a real need.

The things one would be anxious about are: Is the material presented sufficient to meet the need; and is there a concise practical presentation of the clinical states commonly encountered?

The present volume meets both requirements and does it well. Long experience in both special and general hospitals and in teaching renders the authors capable of selecting the right material and presenting it in clear and understandable fashion. They know very well that much psychiatric terminology is confusing and even irritating to those for whom it is not the usual everyday professional language. The laity and even many in the general profession of medicine entertain the definite idea

that in psychiatry resounding terminology is a substitute for foggy and uncertain concepts. Throughout the text the language is as simple as it could well be and there is added at the end of the book a very good glossary of terms that may be unfamiliar to the special groups of readers for whom the book is intended.

The general body of doctrine is unexceptionable, the clinical descriptions are excellent and the illustrative case histories selected serve their purpose well. The same may be said of the illustrations. Some original diagrams showing mechanisms underlying the origin and clinical manifestations of the psychoneuroses are particularly good and will do more to bring understanding than much writing.

Chapters on physical therapy, occupational and recreational therapy and shock therapy are welcome in a book of this size. Too often these important matters receive little more than cursory mention. Here concise directions are given and certainly they will be appreciated. A chapter on psychiatry and the law states the fundamentals well. In a relationship that presents so many "local" variations no more could be expected. The section on privileged communications leaves some inferences that are not justified. In not all jurisdictions are medical communications considered privileged.

All in all, the authors have produced a book well adapted to its intended purpose as a guide to the general practitioner and the undergraduate student of medicine.

A. T. M.

RYPINS' MEDICAL LICENSURE EXAMINATIONS. Fifth edition. Edited by *W. L. Bierring*. (Phila.: J. B. Lippincott Co. 1945.)

This book is highly recommended to those preparing for medical licensure examinations. It consists of summaries of the highlights of each of the medical clinical specialties, along with questions at the end of each section based on the subject matter. This provides a provocative way of testing one's grasp and retention of the material. An important asset of this volume is that the point of view of the examiner is given, since the narrative material and questions are based on a survey of questions actually asked in previous examinations.

The additions to this fifth edition are the editorial supervision of Dr. Walter L. Bierring and a panel of eight experts in their field. The subject matter has been brought up-to-date and a section on pharmacology has been added.

In the classification of the psychoneuroses, the commonly observed reactive depressions are not included, nor is the alternate plan indicated, that of including the reactive depressions as part of the manic depressive psychoses. In general, however, the subject matter is well covered in the various sections for the purpose intended.

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IN MEMORIAM

WALTER EDWARD DANDY,

1886-1946

Walter Dandy is dead. To those who knew his abundant vitality and driving energy, and his forcefulness, even in recent days, in presenting his views and convictions, Dandy has been so vital a person that it is difficult to believe that his voice will no longer be heard. He died as a result of coronary thrombosis suddenly on April 19, 1946. He leaves a son Walter, who is in medical school, three daughters Mary, Kathleen and Margaret, and his wife Sadie Martin, whom he married in 1924.

Born in Sedalia, Mo., April 6, 1886, of parents from England and North Ireland, Walter Edward Dandy attended the public schools of Sedalia and the University of Missouri, and entered the Johns Hopkins Medical School in 1907, with advanced standing. He graduated with the degree of M. D. in 1910 and continued his work in this medical school and hospital, rising through the various stages of the surgical service and academic rank, to become Adjunct Professor of Neurological Surgery in 1932.

Within three years after receiving the M.D. degree, he had with characteristic energy and industry completed and published three scientific studies, one on the youngest human embryo which had been studied up to that time, one on the blood supply of the pituitary body, and one on the nerve supply of this intracranial structure. His classical work on "Internal hydrocephalus: an experimental, clinical and pathological study" was published in 1913, when he was 27 years old. Five years later he produced another classic, on pneumoventriculography, a procedure which he originated and which has been very valuable in the precise localization of intracranial lesions. It has been repeatedly said that ventriculography has been the greatest single contribution to brain surgery every made.

Dandy's mastery of neurosurgical tech-

nique enabled him to make a brilliant series of technical contributions, impressive even in the form of a partial list: operations for the complete removal of acoustic neurinomas, radical new operations for trigeminal neuralgias and neuralgias of other cranial nerves, and for Ménière's disease. His characteristic combination of care in procedure and boldness of aim was well exhibited in his operations for removal of congenital aneurysms of the arteries forming the circle of Willis and of their large branches. Again his self-confident judgment and his virtuosity in surgical technique were demonstrated in his operations for ruptured intervertebral discs, a condition which he discovered and reported in 1929.

Much of Dandy's success in making discoveries and innovations was made possible by his courage and independence of judgment, but boldness was by no means the only, or principal, virtue of his work. His improvement in the surgical treatment of cerebral abscess by utilizing aspirations through tiny trephine openings in the skull was an example of the value he placed on conservative technique.

Dr. Dandy was a member of the American Surgical Association, American Neurological Association, Southern Medical Association, Southern Surgical Association, American Medical Association, Phi Beta Kappa and Sigma Xi.

In addition to his scientific reports in journals, portions of Dandy's large experience were published in a series of books including:

Benign Tumors of the Third Ventricle; Their Diagnosis and Treatment. C. C. Thomas. 1933.

Benign Encapsulated Tumors in the Lateral Ventricles of the Brain; Diagnosis and Treatment. Williams & Wilkins. 1934.

Orbital Tumors. Oskar Piest. 1941.

Intracranial Arterial Aneurysms. Comstock Publishing Co. 1944.

Besides his direct contributions to neurosurgery, Dandy has inspired by his example a series of brilliant younger neurosurgeons, who worked with him and through whose work he will continue to be a living force for further advancement.

The outstanding clarity and succinctness of Dandy's papers was the expression of a forthright habit of mind, which sometimes also involved him in stormy controversies and a few personal enmities, but he regularly emerged from such disputes with the in-

creased respect of his scientific colleagues and it can be safely predicted that his stature as a great figure in medicine will grow in the perspective of time. His international reputation brought him large numbers of patients and he did a tremendous amount of work. Simple and unpretentious in manner, generous in many unpublicized ways, and simple in his personal tastes, he was a delightful friend and companion. There is much personal sorrow at his death, as well as regret at the cessation of a brilliant career of investigation and service for the relief of human suffering.

J. C. W.

PSYCHIATRY IN INDUSTRY¹

FREDERICK W. DERSHIMER, M.D., WILMINGTON, DEL.

This is a sketchy preliminary report on a fulltime psychiatric program in one industry based on its first two years of existence. The author had previous experience in industry.

No attempt was made to lay out a program in advance. Dr. Gehrmann, the medical director of Du Pont, agreed with the author that such an attempt would violate a basic rule of scientific medicine because it would constitute an attempt to prescribe treatment without first making a diagnosis.

It would, indeed, go further in the wrong direction. Accurate diagnosis is impossible without a knowledge of the anatomy, physiology and pathology of the patient. The psychiatrist, therefore, needed to learn as a first step everything possible about the organization and healthy functioning of the industry and, next, its psychiatric problems. Then, and only then, could he hope to make accurate diagnoses of psychiatric needs and plan how to treat them.

The importance of this basic knowledge appears to have been underestimated in the literature on psychiatry in industry, much of which is built upon flights from reality and creates an aura of witchcraft about the subject. It offers remedies for ills that do not exist, for ills that are unimportant, or ills that are already fairly well controlled. It completely misses some important problems on which psychiatry might offer valuable aid if psychiatry would first learn what these are and accept them as problems for study.

The general result is that industrial management, not illogically, looks upon psychiatrists as long-haired, impractical theorists who, without ever spending the time to learn the facts, attempt to tell industry how to run its own business; or goes to the opposite extreme and accepts the idea that psychiatrists are miracle workers who have panaceas to charm away all their problems. Either attitude makes serious problems for the psychiatrist entering industry.

No psychiatrist can learn all about in-

dustry by visiting a plant or two and talking with a few members of management. Industries, like individuals, have each their own personalities based on the personalities of top management, on company policies, the type of industry, and a host of other varying factors. Even within a large industry, such as ours, there are great variations between different departments, as psychiatrists should expect. The emotional atmosphere in an area where a highly toxic substance is made is different from that in a plant where the chemical hazards are minimal; or from that in an explosives plant where the hazards are quite different.

This emotional atmosphere varies, too, in proportion to the efficacy of the protective measures employed. Our explosives plants, for example, have for years maintained an accident rate which averages around 10 per cent of that in explosives plants in general and which is lower than that of many industries which are not considered hazardous.

The chief psychiatric hazard, as a result, is not found among the operators in such plants at all. It is, instead, the anxiety which the superintendents of such plants tend to develop as a result of the emphasis on preventing accidents. This creates strains which, in susceptible individuals, may precipitate psychoneuroses.

Psychiatric problems depend, likewise, on the kind of medical service supplied by the company. Tetra-ethyl lead is a highly toxic volatile substance capable of rapidly causing death either by inhalation or by absorption through the skin. When its manufacture was first attempted, fatalities occurred. Other men became psychotic after exposures. Lead encephalopathies were found postmortem. There is, as a result, a great fear of this substance among those who work in it.

But our own medical research has shown, long since, that the absorption of this substance can be accurately measured by means of analysis of blood, urine and feces and that untoward effects do not occur unless certain concentrations of lead are reached. Men working in areas where the substance is

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

made are, therefore, examined every three weeks and specimens of blood, urine and feces are taken. If, on analysis, the concentration of lead is found to be *one half the least* amount that can cause trouble, the individual is removed from that area until further analyses show him free of lead.

Every effort is made by the plant physicians to educate the operators and their supervision with regard to the hazards and means of protection. Any man who, through accident, suffers any unusual exposure is rushed to the plant hospital for cleansing and medical treatment. By such education and preventive examinations and treatment, every effort is made to bring the hazards of the operation out of the realm of the unknown into the known, and then to supply adequate protection to the men. The mental hygiene value of such procedures cannot be over-estimated. Knowledge of them is essential to the psychiatrist who would attempt to do rational psychiatry in such areas.

He would need to know even more. The American workman has certain traits and habits which also enhance some psychiatric problems. Older employees in hazardous occupations, for example, commonly initiate new men by telling them all the tall tales they can invent at the moment, and all that have been invented in the past, about the dangers of their work. Fact and fiction are skilfully combined into a fearful whole. And some new men accept it all and work thereafter in a state of chronic terror.

The American workman has another habit which misleads the casual visitor to plants and helps to keep psychiatrists and many other people misled about how hard he works. Whenever a visitor approaches a plant, the word is quickly passed around. If men are shooting craps in the locker room, they are notified; if others are sleeping in the toilets, they are awakened. Those who were visiting friends hurry back to their stations. All of them assume a serious expression and work as if their lives depended on it. So the visitor leaves with the feeling that they lead very hard lives.

The facts may be quite different. The monotony of labor that allegedly breaks workmen down is sometimes due to men having too little to do. In a certain electric weldery known to the author it was easily

possible to measure the total time spent in actual welding by the consumption of electric current. Calculations based on such figures showed that the average welder was then welding about 30 percent of the time. Facts like these must be known to the psychiatrist before he can hope to diagnose industrial ills.

Psychiatrists may also develop misconceptions about the psychiatric needs of industry and their importance as a result of accepting diagnoses of such needs from some individuals connected with industry. The emphasis placed on psychiatric screening and placement examinations is an example. It may well be doubted whether this is or ever will be very important to industry as a whole, although there are industrialists who like to talk about it.

But the psychiatrist needs to diagnose such enthusiasts and their proposals before assuming that they represent either industry or its needs. Some of them, as he will then discover, belong to the fringe who seek for some magic substitute for the hard, intelligent efforts which are essential in good management. To be able to diagnose poor management and such unrealistic elements in its causation, the psychiatrist must also learn what sound management is like.

The psychiatrist who investigates will find also that industry employs and uses individuals who fit into every known psychiatric category and that individuals whom the average psychiatrist might think unemployable often prove to be valuable employees. I know, for example, one paranoid schizophrenic who was expelled from a small mental hospital because of the disturbances he caused there. He was hired and put to work in a factory before this interesting bit of recent history was obtained and, after one slight disturbance, which was well handled by his foreman alone, he worked satisfactorily for the two years he could be followed.

As this suggests, industry may be able to teach us something about handling difficult psychiatric patients. And before we decide to screen them out, we need to give serious consideration to the fact that industrialists, known for years to be serious psychiatric cases, have made invaluable contributions to industry.

As a simple means of learning some of the necessary basic knowledge, the author began

his work in the Du Pont Company by acting, for several months, as a regular industrial physician in the home office, doing routine physicals, caring for first aid patients and consulting with employees on their medical problems. This supplied an opportunity to learn something of the policies of the company and to see a cross-section of the employees including members of top management. In addition, frank psychiatric problems were referred to him as they appeared.

Out of this, in a natural manner, a psychiatric practice developed. Incipient psychoneuroses and other conditions were discovered early, diagnosed and treated. Supervision and management began to refer problems. Questions of sick leave led to consultations and conferences about some of these. In a few months, psychiatric work demanded the author's entire time.

From this beginning, the work has branched out in several directions. Of these, the most important remains that of learning the physiology—the normal functioning—of various units of the company. And, with this, the pathology—the psychiatric problems—of these units. It may appear that I over-emphasize this, but I do not believe this can be done. Psychiatry cannot be rationally applied to industry except on the basis of current knowledge of that industry in all its parts.

So, whenever possible, visits are made to plants and laboratories. On such visits every opportunity is grasped for talking to the operators, technical men and management to learn what they are working at and how they approach it. One technical division invites the psychiatrist to sit in on all the meetings of their top staff. Meetings of sales, advertising and production executives have also been attended. To some of these the psychiatrist has been able to contribute.

Out of such study and contacts has come one of the most valuable projects in our program. For the past six months or more, the management and directors of a large research division have been meeting specially, twice a month, in a seminar with the psychiatrist to discuss their own emotions and any problems of managing themselves or their personnel which may arise. This constitutes the equivalent of group therapy applied to normal people in positions of con-

siderable authority. The results are already becoming apparent in their own attitudes and behavior and in the morale of their subordinates. This is genuine preventive psychiatry. It is also the first attempt known to us to develop executive ability on a scientific basis.

Another valuable procedure has been the conferences held with members of management and supervision about cases in which management's treatment has adversely affected the patients. Men in authority have shown great interest in learning about anything they had done to precipitate such cases, in order to learn how to avoid such detrimental practices in the future. In some cases, the superiors themselves have come in for treatment of personality traits which were interfering with the productivity and development of their subordinates. Better human relations have resulted from such conferences. This, too, is preventive psychiatry.

Time will not permit a detailed report on all our activities. They include early treatment of incipient psychiatric problems, advice as to the referral or hospitalization of more severe ones, talks to groups of supervisors and plant managers, papers for our plant physicians, and clinical instruction at the plants for some of them as circumstances permit.

A serious unsolved problem is the fixed habit of many uninformed practicing physicians and surgeons, including some psychiatrists, of advising all "nervous" patients to take time off. The Du Pont Co. pays full wages for three months in case of illness after one year of service. If the employee has agreed to pay for his share of the premium, he receives an additional \$25.00 a week accident and health benefit. The physicians in question know this and order time off with greater than average freedom because the patient will not suffer financially. By doing this they turn incipient psychoneurotics into chronic cases which are then much more difficult to treat. Education of the medical profession in the diagnosis and proper treatment of psychoneurotics will alone correct this dangerous practice. We are making some small experiments to determine how such education can be most effectively accomplished.

CONCLUSION

I. Industrial management is open-minded about the application of psychiatry in industry provided the psychiatrist is willing to learn about industry and its problems. In our own experience, we find that top management increasingly asks for psychiatric help in personnel problems. This, in time, will result in improved mental health throughout the entire organization, *if our advice is sound*. This—the top—is the place preventive psychiatry must start to be effective.

II. It seems obvious that the basic causes of all functional mental disease exist, grow and cause some manifestations in normal

people; that normal people are the hosts or carriers from whom unfortunate individuals contract the more serious, recognized forms of this group of ills. Until we learn far more than we now know about this part of the cycle, we cannot hope to learn how to treat and prevent mental disease. Industry offers the psychiatrist an unique opportunity to explore this important area, now one of almost complete darkness.

III. We have already developed a psychotherapeutic approach with which, in several hundred cases of psychoneuroses and a few psychoses, it is possible to obtain lasting good results with a very few interviews while the patients continue at their regular work.

CURRENT TRENDS IN INDUSTRIAL PSYCHIATRY¹

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Since its beginnings as a specialty some thirty years ago, the growth of industrial psychiatry has been highlighted by a few outstanding successes, but its major gains have been accomplished through a slow and often uneven process of infiltration. Even after the impetus given by World War I, progress in the next ten years was sporadic, coming virtually to a standstill during the ten years preceding World War II. The utilization of the concepts of psychiatry and mental hygiene in the present industrial scene has still not advanced beyond the pioneering and exploratory stages. It is too soon to say with any certainty whether the upsurge given to industrial psychiatry by the last war has finally laid the foundation for a more rapid and a more extensive development of this field than has occurred in the previous three decades. The present widespread concern over the placement and readjustment of men discharged from military service with neuropsychiatric conditions has served to keep alive the impetus which was given by the manpower problems during the period of mobilization. Another and still more recent stimulus arises from the recurrent, deeply seated problems in the human relations field growing out of unresolved conflicts between individuals and groups representing the opposing points of view of management and labor.

In addition to the immediate problem presented by the dearth of psychiatrists with adequate industrial experience and orientation, a great amount of educational work still needs to be done before management as it is now constituted will be able to appreciate and accept the contributive possibilities of psychiatric understanding and techniques. This is true from the humanitarian as well as the economic point of view. Two practical obstacles which stand in the way are the lack of training facilities for psychiatrists in industry and the absence of established prece-

dent for initiating psychiatric programs(1). Since the functions of the psychiatrist who enters industry invariably encompass both medical and personnel fields, it is important that he should not be too narrowly identified with purely medical or clinical activities. He must be prepared from the outset to collaborate and adapt his techniques to those of other departments within industry dealing with human relations, such as personnel counseling, psychological services, employee research, and various industrial relations activities which are sometimes grouped under the term "human engineering."

It is in many ways fortunate that the educational, advisory, and consultational nature of the psychiatrist's work within an industrial organization requires no special grant of authority; but on the other hand little real progress can be made without the full endorsement of top management. Experiences of industries that have utilized psychiatrists on either a full or a part-time basis during the war have completely dispelled the initial fear of some that unless it is done secretly, the introduction of a psychiatrist would be resented by employees. There is no longer any need, if indeed there ever was, for concealing the identity of the psychiatrist or having him masquerade under a false title. Such unrealistic methods merely complicate his task and are as handicapping in the end as the mistake on the other extreme of announcing his presence with great fanfare.

The specific functions of the psychiatrist in industry have characteristics all of their own and some of these stand in marked contrast to the procedures used in the private office or clinic. In his work as catalyst to all activities which have to do with the handling of people and the prevention of damaging interpersonal relations, the industrial psychiatrist cannot work in isolation. His efforts must be intimately correlated and coordinated not only with those of medical and personnel workers, but also with the activities of those who give psychological tests and are engaged in interviewing and

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

counseling employees. In the interest of serving the organization as a whole it will be necessary to modify and adapt concepts concerning confidential information after the manner in which this is done in a psychiatric clinic.

The following list gives some of the broader consulting and educational functions in which the industrial psychiatrist must play a leading part:

1. Correlation of techniques for improving the selection, placement and promotion of employees presenting some degree of mental, emotional or intellectual disorder.

2. Elucidation of techniques for uncovering actual as well as potential "problem employees" and for the handling of such individuals by supervisors, medical and personnel consultants, including the line of referral for those who require psychological or psychiatric consultations.

3. Participation in training programs for counselors and supervisors in respect to understanding and handling the psychological factors influencing the productivity of both normal and problem workers.

4. Checking the effectiveness of, and developing techniques for improving all employment, medical and personnel functions involving interviewing and counseling.

5. Provision of a consulting service open to both management and labor union officials, as well as others who voluntarily request interviews.

6. Organization of research projects which throw light on causes and remedies of personality problems on both employee and supervisory levels.

It might be of interest in this connection to review some of my own experiences during the war period as a part-time psychiatric consultant in a plant having 2200 employees. The overall span covered by this experience was fifteen months, which on the basis of two days per week corresponded to about five months on a full-time basis. It should be said that this venture was undertaken without any preconceived plan or assignment beyond the broad objective of assisting in the selection of personnel, and in searching for methods of improving employee and supervisory morale. A tabulation of the activities carried on during the fifteen months period

reveals that approximately 15 percent of the time spent was in personnel and medical department contacts, 9 percent was taken up by conferences and training sessions, and the remaining 76 percent was employed in interviews with individuals on all of the organizational levels throughout the plant. These were divided fairly evenly between top executives, foremen, salaried employees and hourly paid workers. Many of the contacts on the supervisory level were initiated through survey interviews, and this approach was productive not only of much material on morale and employee opinion concerning plant policies, but functioned also as a source of referral for a wide variety of personality and adjustment problems which would otherwise not have come to attention in their earlier phases.

One of the industrial psychiatrist's most fruitful contributions is related to the assessment of mental, emotional and temperamental qualities of applicants for employment. There is great need in industry for more training in the psychiatric background which is essential for accurate personality appraisal during pre-employment examinations and interviews(2). The paucity of observations in the average industrial medical record on personality elements stands in marked contrast to the completeness with which the physical inventory is made. The need for techniques to correct this hiatus is still further emphasized by the now generally accepted fact that the placement and continuing supervision of the employees with personality disorders is of far more importance than that of the physically impaired or handicapped.

Bearing further on this point, one interesting survey recently made on a group of employees in a large war plant conclusively proves the predictive value of even a relatively superficial psychiatric approach at the time of the pre-employment examination. The plant physician in this instance possessed a remarkable degree of psychiatric insight, and at the time of making his routine physical examination he developed the practice of recording his informal observations on the general mental and emotional balance of applicants for employment. About 3 percent of those hired had notes indicating that these employees were potentially un-

suitable for factory work on the basis of the observed attitudes and personality makeup.

In an attempt to determine the reliability of these observations, a subsequent study, based on available personnel and medical records, was made of some 1400 employees who remained with the plant for two years or more. It was found that a high proportion of the persons that had manifested inability to get along and who had excessive friction with fellow employees and supervisors were among those on whom notes concerning personality reactions had been made. The group on whom unfavorable appraisals had been made reported up to 75 percent more sick absenteeism than did the average employee. In addition, this group had more minor accidents, showed a higher average number of visits to the medical dispensary, and violated shop rules more frequently than the control group.

A review of the brief personality characterizations which were made at time of employment reveals that they are descriptive of surface reactions and response patterns readily discernible on trained first impression. This makes the fact that they had such a high predictive value all the more striking. In a general way these comments may be grouped into four categories, as follows: (1) those showing distinctly negative personality reactions (arrogant, distrustful, resentful, "smart-alec," etc.); (2) those indicative of mental disorder or defect (disconnected responses, slow mental reflexes, state hospital record, etc.); (3) those showing neurotic tendencies (anxious, excitable, fingernail biter, jumpy, sensitive, etc.); and (4) miscellaneous and borderline characterizations not directly classifiable (perfumed, quiet, self-assured, talkative, etc.).

As might be expected, the employees in whom strong negative reactions had been observed almost without exception stood highest in the group with unsatisfactory work records. But the survey also revealed another fact which was not apparent at first glance, namely that the unsatisfactory performance was not significant until the study group had passed the first six months probationary employment. It was after employees had attained seniority that the bulk of maladjustments anticipated on the basis of the original personality description came to

attention with increasing frequency. The long-range predictive value of the psychiatric approach in employment interviewing is thus clearly demonstrated.

But the psychiatrist's interest in the contributive potentialities of employees goes beyond the improvement of personality assessment techniques at the time of hire. It extends to all points of interpersonal contact between employees and supervisors within the organization. Direct consultations with and conferences concerning individual problem workers can be expected to utilize the greater share of the psychiatrist's efforts, but it would be falling short of his highest contribution if he devoted his time exclusively to such more or less clinical aspects. The majority of personality and adjustment problems which find expression in terms of medical and psychosomatic complaints are more appropriately handled by the industrial physician, whose functions as psychotherapist are of course a matter of direct concern to the psychiatrist (3). While a high percentage of problem workers will come to attention through contacts with the medical department, it must be emphasized that the psychiatrist cannot expect to find all the major sources of individual and group conflict through this single referral point.

Another and in some ways a much more effective entry into problem situations involving human relations can be implemented through the use of survey interviews in selected key departments of the organization. Besides disclosing overall trends which give a tangible basis for assessing departmental morale, survey interviews offer highly favorable opportunities for direct contacts with foremen and supervisors. It is remarkable that no matter how busy he may be, the average foreman is always eager to enter into a discussion concerning human relations. Foremen as a group invariably show deep concern over the need for more effective methods of handling employees who manifest emotional problems on the job. In the course of such discussions they are very likely to reveal their own attitudes, not only toward the men under them but also toward their executives and the management policies of the organization. Fixed opinions towards unions, race relationships, or women em-

ployees are frequently revealed as sources of friction and conflict in the supervisor's daily contacts. Besides their value in helping to diagnose trouble spots, the troubled supervisors, and problem workers, survey interviews frequently disclose promising material often otherwise overlooked by routine promotional policies.

In a small series of survey interviews the writer interviewed 9 foremen concerning

range of unsatisfactory employees was from 11 to 36 percent, with an overall average of 23 percent. Besides revealing that in general one man out of 5 is an unsatisfactory employee, this survey brought out wide differences in the ratings of foremen on a comparable group of employees, a fact which is bound to have its influence on departmental morale and efficiency, as well as on the manner in which specific human relation

TECHNIQUES USED IN THE MANAGEMENT OF INTERPERSONAL RELATIONS IN INDUSTRY

CLASSIFIED ACCORDING TO ASCENDING LEVELS OF COMPLEXITY

Counseling and psychotherapeutic interviews

Therapy of psychiatric conditions: mood disorders, psychotic symptoms, acute and chronic neurotic reactions, and personality disorders

Psychiatric first aid for emotional disturbances, including acute manifestations

Referral techniques and procedures

Medical consultations and treatments

Counseling interviews with problem employees (relating to discipline, personality clashes, rules infractions, lay-offs, discharges, etc.)

Counseling services for employees

The Hawthorne and non-directive techniques

Job relations and job adjustment interviews (i.e., concerning wages, grievances, upgrading, promotion, transfer, etc.)

Advisory and educational contacts on the job

Survey and employee opinion interviews

Employee appraisal interviews

Pre-exit and exit interviews

Employee "post-mortem" discussion conferences

Lectures and conferences on industrial human relations

Psychological factors in job instruction and job training

Sponsorship system for new employees

Informational level

Interviews regarding psychological tests and results

Personality appraisal (as part of medical examination)

Pre-placement employment interviewing

Case history approach

Preliminary screening

Final selection and placement

Interviewing for key positions

Interpretation of application forms and questionnaires

some 300 men who had been employed steadily for a year or more, with a view toward obtaining direct information on morale and efficiency in each foreman's department. The foremen were asked to rate their men by impression on the following six factors: attendance, work output, attitude and personality, health, aptitude, and social adjustment on the job. It was found that wide differences existed among the 9 foremen as to the proportionate number of men whose work performance was unsatisfactory. The

problems are handled as they arise on the job. From this it is obvious that the survey interview approach offers a stimulating channel for the efforts of the psychiatrist, both in his personal contacts with foremen and referred employees, and in a broader way as a source of material for use in training programs in industrial human relations.

Any attempt to summarize in a practical way the chief contribution which psychiatry brings to industry invariably focuses attention on the subject of interviewing and

counseling techniques. Although there is always a considerable degree of overlapping, for purposes of classification the more significant interpersonal relationships within an industrial organization can be grouped under three headings: informational, advisory and educational, and therapeutic. The table on page 152 gives examples of the more common interviewing situations, and the techniques used, arranged on an ascending scale of complexity. When the problems of industrial human relations are approached from this point of view, it is readily seen that there is a definite place for psychiatric understanding and orientation on all of the interviewing levels, ranging from the utilization of the case history approach in employment procedures to the application of elementary psychotherapeutic methods in the form of catharsis, counseling techniques, and psychiatric first aid.

CONCLUSION

In addition to its basic function as an integral part of the preventive arm of industrial medicine, industrial psychiatry has an active rôle to play in the rapidly growing field of industrial human relations. As the consulting, advisory, educational and therapeutic functions of the industrial psychiatrist are becoming more and more clearly defined, both in the clinical and in the personnel areas, the value of this type of service is becoming firmly established from the economic as well as from the humanitarian point of view.

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EPILEPSY

TREATMENT WITH NEW DRUG: 3-METHYL 5,5-PHENYL-ETHYL-HYDANTOIN (PHENANTOIN)¹

HARRY L. KOZOL, M. D., BOSTON, MASS.

This is a report on the treatment of 104 epileptics with a relatively new drug: 3-methyl 5,5-phenyl-ethyl-hydantoin. This drug has been temporarily called "phenantoin"² and will be referred to as such below.

A preliminary report was presented recently(1). The use of this drug in a large series of patients has not been reported previously. Loscalzo used a special preparation called "hydantal" which was a fixed combination of phenobarbital with 3-methyl 5,5-phenyl-ethyl hydantoin(2). He noted that 6 of his 17 patients developed some drowsiness; and he therefore omitted the phenobarbital-combination during the day in favor of the uncombined drug. Clein has reported on the use of this same hydantal in 10 cases(3).

In my series 60 percent of the patients have had the average monthly frequency of their attacks reduced to one-tenth of what they were before this drug was used. This is a 90 percent reduction in the frequency of their attacks. The maximum length of time between attacks has been tripled. Thirty percent of these patients who showed benefit have remained free of attacks for a period of from 3 to 22 months.

The similarities and differences between phenantoin and dilantin-sodium may be noted by a comparison of their structural formulas. (See opposite column.)

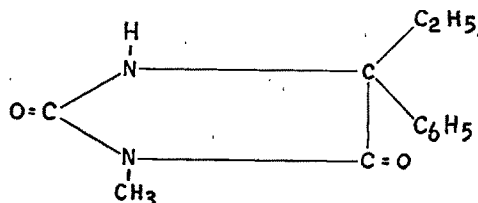
Phenantoin may be used alone or in combination with others and particularly with dilantin-sodium. In fact the synergism which exists between phenantoin and dilantin-sodium has made possible therapeutic results which were unattainable with either drug

alone or in combination with barbiturates.

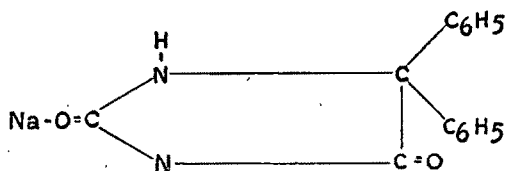
The 104 patients on whom this study is based were seen in the epilepsy clinics of the Boston City Hospital, the Children's Hospital of Boston and in private practice.

Phenantoin was first administered to: patients who were having frequent epileptic attacks despite maximal doses with dilantin-sodium, etc.; patients who had suffered marked gingival hypertrophy from the use

3-METHYL-5,5-PHENYL-ETHYL-HYDANTOIN (PHENANTOIN)



(SODIUM DIPHENYLHYDANTOINATE) DILANTIN-SODIUM



of dilantin-sodium; and for other reasons, including the appearance of a rash. In many cases the margin between therapeutic effectiveness and the production of ataxia is very narrow in dilantin-sodium; and in some patients doses which produced gross and continued ataxia failed to give satisfactory relief from seizures.

In a sense, a large number of the cases in the present series are *selected* on the basis of their recalcitrance to previous treatment. It is probable that in a truly unselected group of epileptics the results of treatment by phenantoin would be even better than those reported here.

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From the Neurological Unit of the Boston City Hospital the Children's Hospital of Boston, and the Department of Neurology, Harvard Medical School.

² Recent word from the Sandoz Co. indicates that phenantoin will be hereafter called mesantoin.

One of the principal values of phenantoin is that it can be administered in substantially *larger* doses than either dilantin-sodium or phenobarbital. Without regard to the comparative anti-convulsant properties of phenantoin and dilantin-sodium, weight by weight, it appears possible to give larger *total* anti-convulsant doses of phenantoin. The principal drawback or side effect of phenantoin is that it tends to produce drowsiness. However, this effect is not at all comparable with the soporific effect produced by barbiturates, and can in most cases be eliminated or obviated by gradual increases in dosage. Another advantage is that this drug does not have a disagreeable taste and thus may be administered to infants who sometimes object to the taste of dilantin-sodium even when attempts are made to conceal it in food. Also this drug may be administered in small pill form which makes it easier for children to swallow. No case has reported gastric distress from its use. No case on phenantoin has developed hypertrophy of the gums or hirsutism. Most of the cases which had developed gingival hypertrophy on dilantin-sodium developed a recession of the hypertrophy when phenantoin was substituted.

Rash appeared in approximately 10 percent of the patients, but it was possible to desensitize some of them so that only 7 percent were unable to continue on the drug because of a skin reaction. Three patients who developed a rash on dilantin-sodium, precluding continued use of such, succeeded in taking phenantoin.

The *toxicity* of phenantoin appears to be very low. One patient, age seventeen and weighing 150 lbs., ingested a total of 7.2 grams (72 tablets of 0.1 gram apiece) at one time in a suicidal attempt. This exceeds the largest reported single ingestion of dilantin-sodium by 0.7 gram. When found eight hours later he was in a deep stupor but did not appear dangerously ill as his respirations, blood pressure and pulse were within normal limits. He could be aroused within twelve hours from the time he took the drug and appeared entirely free of its effects within thirty-six hours.

The *results* of the treatment with phenantoin may be summarized statistically with respect to the *frequency of attacks* and the

duration of the longest intervals between attacks.

In the entire series of 104 patients there was an approximate reduction of 20 percent in the frequency of seizures. However, if a selected group of 62 patients (60 percent of the whole series) is taken *there has been a reduction to one-tenth or an improvement of 90 percent.*

The average *duration of the longest intervals between attacks* in the entire group was 70 days. Following the initiation of phenantoin treatment the average duration of the longest intervals between attacks is 138 days which is nearly double the previous maximum duration. In the selected group of 62 cases, prior to the initiation of phenantoin treatment, the average duration of the longest intervals between attacks was 66 days. Following the initiation of phenantoin treatment this maximum period of freedom from attacks has been extended to an average of 200 days which *is more than three times the previous maximum duration.*

Sixty-two patients, *60 percent* of the entire series, were either *greatly or moderately improved* on phenantoin treatment. By *greatly improved* was meant: attacks markedly reduced in frequency, free intervals markedly increased or both. There were 45 patients (43 percent of total) so classified. By *moderately improved* was meant: frequency of attacks reduced by at least 50 percent, free intervals definitely increased in duration, or both. There were 17 patients (17 percent of total) so classified.

Ninety-six patients had previous treatment of whom 82 received dilantin-sodium either alone or in combination with barbiturates, 11 had phenobarbital and 3 had tridione.

Forty-seven of the 62 patients classified as improved had been treated with dilantin-sodium either alone or in combination with other drugs previous to phenantoin treatment. Nine had been on phenobarbital alone.

The average dose for a child is 0.4 gram daily. The average dose for each of the 78 youths and adults in this series is 0.6 gram daily. There were wide individual variations ranging from 0.3 gram daily to over 1.0 gram daily.

The average duration of phenantoin treatment in this series was 10 months. Twenty-

one patients have had the drug for periods of 12 to 15 months; 21 have been on the drug from 16 to 22 months.

Sixty-five percent of all patients with predominant grand mal showed substantial improvement on phenantoin. Seven of the 9 predominant psychomotor cases improved. The petit mal group must be considered as unimproved pending experience with a larger group over a longer period of time.

It is of the utmost importance to recognize that the effective administration of phenantoin to a patient requires persistence and therapeutic acumen. Most of the patients on phenantoin developed drowsiness which was directly related to the dosage. Patients were much less likely to develop drowsiness if they were started on small doses (0.1 gram daily) which were gradually increased. Most of the patients were able to tolerate doses in excess of the ones which originally produced drowsiness after varying periods of time extending from one to three months. This emphasizes the importance of persistence. Incidentally a rash is probably less likely to appear if one begins with small doses.

The synergism between phenantoin and dilantin-sodium is a happy one. Neither enhances the undesirable and limiting side-effects of the other. Thus, some cases which could not be satisfactorily controlled on either were controlled by a combination of maximal doses of both. It is possible to push both drugs to the limits of tolerance.

A word of caution and restraint should be added. This drug appears to have been spectacularly effective in some cases as will be seen by the brief case reports mentioned below. However, some of these patients may later develop tolerance to phenantoin and regress. Only time will reveal the exact place of phenantoin in the treatment of epilepsy.

Below are presented a few cases which illustrate some of the more gratifying results of treatment with phenantoin.

1. P. M., Case No. 32, is an 18-year-old girl who has had psychomotor attacks for ten years. In the two years preceding phenantoin treatment she averaged at least 100 such attacks per month and frequently had as many as 10 daily. In each attack she would wander about aimlessly, urinating as she walked. These attacks, which had grown worse in present years, resulted in the withdrawal of a college

scholarship. She was unable to hold any sort of job except in a ten cent store where her sister was the manager. Doses of 0.5 and 0.6 gram of dilantin-sodium failed to reduce the frequency of the attacks. The longest period free of attacks, previous to phenantoin treatment, was one month. Phenantoin treatment was begun 16 months ago. Her attacks were reduced to a frequency of 0.2 per month and she has not had a single attack for a year. She takes 0.9 gram of phenantoin daily. For the last 6 months she has held a steady job as a teller in a bank.

2. G. S., Case No. 42, is a 32-year-old man who has had attacks of grand mal for 15 years with an average frequency of one per week. He has not gone more than 4 months without an attack. His previous treatment had been dilantin-sodium up to 0.6 gram (on which he became grossly ataxic) plus phenobarbital. Many of his convulsive seizures took place while at work and cost him his job. He has been on phenantoin alone for 15 months. In the first two months of treatment he had two seizures. He has now gone 13 months without a single attack. His maintenance dose of phenantoin is 0.8 gram.

3. E. I., Case No. 25, is an 18-year-old girl who has had attacks of grand mal since the age of 11. Despite exceptional attractiveness and superior intelligence she was asked to leave a boarding school because of her attacks. It had been necessary to maintain her on large doses of phenobarbital because dilantin-sodium produced a recurrent rash. Previous to phenantoin treatment she averaged, at the very least, 8 attacks per month and had not gone over a week without an attack. She has been on phenantoin for 7 months. In the first 4 months she had 6 mild attacks. She has now gone 3 months without a single attack. It should be added that she has had a great reduction in auras of which she used to have a great many in addition to her outright seizures. Her dosage of phenantoin is 0.8 gram daily.

4. P. M., Case No. 58, is a 46 year-old-man from whom a suprasellar cyst was removed in 1939. Two years later he began having generalized convulsive seizures. Dilantin-sodium treatment was begun in 1942. He had taken his dilantin-sodium faithfully in doses which were so large as to produce ataxia and which resulted, on one occasion, in his arrest on suspicion of intoxication. In the 30 months preceding phenantoin treatment he had at least 64 grand mal attacks, which is an average of more than 2 attacks per month. His longest free interval had been 2 weeks. In 12 months of phenantoin treatment he has not had a single attack. His dose is 0.8 gram daily.

5. M. C., Case No. 49, is an 18-year-old girl who has suffered attacks of grand mal for 14 years. In the year preceding the beginning of phenantoin treatment she had 48 attacks despite the fact that she was on dilantin-sodium, 0.6 gram daily plus mebaral, 0.3 gram daily. This medication had

produced hypertrophy of the gums and ataxia. The longest interval free of attacks in 5 years had been one month. She has been on phenantoin 18 months. In the first 5 months of phenantoin treatment she had 8 mild attacks. She has now gone over a year without an attack. Despite a phenantoin dosage of 1.0 gram daily she is not drowsy.

6. C. C., Case No. 10, is a 25-year-old woman who has had grand mal seizures for over 20 years. She had an average of 12 seizures per month and in the preceding 5 years had not gone more than 3 months at any one time without a seizure. Phenantoin treatment was begun 20 months ago. In the first 4 months it was overlapped with the dilantin-sodium she had been taking. In the last 16 months

she has been on phenantoin alone. She has not had a single attack for 20 months.

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DISCUSSION

DR. ANTHONY E. LOSCALZO (New York, N. Y.).—My experience with this new drug dates back to 1943 when the first clinical study of it was begun. At that time it was carefully tried on a group of 18 very cooperative patients for a period of about 16 months. Three years ago when this new drug was brought to my attention, I noted the similarity between its chemical structural formula and that of DPH.¹ I had questioned hundreds of epileptic patients and the majority of them were taking DPH plus phenobarbital. I also questioned many physicians who treated epilepsy and found that 90% of them include phenobarbital with DPH in their therapy of epilepsy. Most of the physicians felt that phenobarbital has a synergistic action with DPH. Many clinicians have expressed the same opinion in print from actual clinical studies. In view of all this, I decided to use a combination of phenobarbital with this new drug. The plain drug (phenantoin or N4) was given to 6 or 7 patients, but better results were obtained when given later to the same patients in combination with phenobarbital. In view of this, the combination was given to the 18 very cooperative patients.

Since 1943 the studies have continued, and at present, I am treating a group of approximately 75 patients. This group is equally divided between the two sexes. All of the patients are adults except a group of 8 or 9 children referred to me by physicians and who have been receiving the drug for the last 8 months. Ninety percent of the present patients were taking DPH plus phenobarbital previous to this new drug. The full and complete details of this study will be in publication soon.

The results at this date of the present series of 75 patients are substantially the same as reported in June 1945. There has been a reduction of approximately 60% of grand mal. It has had no effect on petit mals or the other forms of epilepsy. This drug, in my opinion, is definitely less toxic than DPH. Many patients who could not tolerate DPH have been able to take this drug without toxic effects. This clinical opinion has been borne out recently by experimental data. Swinyard and Good-

man studying a group of hydantoins and using two new laboratory techniques found that the ratio of the toxic dose to the protective dose is a value of 12 for this drug and only 2 for DPH. Another interesting finding of the same authors was that 5 mg. per kilo of this new drug protected the animals against maximal electro-shock, whereas, 50 mg. of DPH was required for the same protection. These laboratory experiments substantiate the clinical findings. Out of 75 cases in this group there were 4 cases of gum hypertrophy, or approximately 5%. The hypertrophy was minimal and of no clinical significance. Of course, these were adults and I understand that gum hypertrophy is more common in children with DPH. There also were 3 cases of skin rash, or approximately 4%. In one of the three, the drug was discontinued, but the other two were continued on the drug after a cautious tolerance was developed. Ten cases complained of drowsiness, this is 13%, but this complaint of drowsiness became less troublesome after the patient became used to the drug. In the clinic last week, before I left New York, one patient who had been taking the plain drug for two months developed a crop of ulcers in the mouth involving the buccal mucosa. These ulcers resembled the commonly seen canker sores. A blood count showed a normal white count. This case will be more fully studied later. No other toxic effects attributable to this drug were noted. One patient developed infectious jaundice but, the jaundice cleared up in about three weeks while the patient was on a full therapy.

I wish to make one point very clear, this drug has no antagonistic action with phenobarbital. In fact, I am of the opinion that phenobarbital acts in synergy with this new drug. This opinion, I am afraid, is in disagreement with Dr. Kozol's opinion. In Dr. Kozol's series, he discussed the toxic effects of drowsiness and skin rash. I wish to point out all the toxic manifestations already mentioned. However, the percentage of toxicity with this drug is still quite less than DPH. Dr. Kozol has presented a very well prepared paper and my experience agrees with his almost entirely.

In conclusion, after three years of study and ob-

¹ Diphenylhydantoinate.

servation of this new drug, I am convinced that we have a new and powerful weapon in the treatment of epilepsy. This drug will not replace other present anticonvulsant drugs, but is an addition to the therapy of epilepsy. More work will be necessary in order to determine its full merits or demerits, but at this stage, I daresay, that phenantoin or N₄ is just as much an improvement over DPH as DPH was over phenobarbital.

REPLY BY DR. KOZOL.—There are some comments I wish to add. Apparently there has been some misunderstanding about my statements concerning the use of phenobarbital in combination with phenantoin. Phenantoin and phenobarbital are not antagonistic; and I had no intention of giving such an impression, nor was I aware that I had done so. I agree that phenantoin and phenobarbital are synergistic. The trouble is that they are all together *too much so* as regards *sedative* effect. That is the objection to giving them in combination, because the sedative effect of the added phenobarbital sharply limits the total quantity of anti-convulsant phenantoin which can be given. Phenantoin is far superior to phenobarbital in its anti-

convulsant effect. As I have pointed out, the principal factor which limits the dosage of phenantoin is the sedative effect produced by the drug. Thus to add a sedative like phenobarbital only enhances the undesirable effect of limiting the total anti-convulsant dosage of phenantoin without adding any advantage. I may be mistaken but I was under the impression that in the report by Dr. Loscalzo on the use of the phenobarbital combination, he started with the combined form and only turned to the uncombined form because of the development of drowsiness in some of his cases. Phenantoin doesn't need any sedative supplement; if anything, it could use a stimulant supplement. Phenobarbital is known to have but a moderate anti-convulsant and a substantial sedative effect. As the principal synergism which exists between phenantoin and phenobarbital is a sedative one, it is an undesirable one. That is the reason why I consider it inadvisable to use it in combination. I am sure that by the use of this combination it has been impossible to produce an anti-convulsant effect which at all compares with that obtained by maximal tolerable doses of phenantoin alone.

TWO NEW DRUGS IN EPILEPSY THERAPY¹

WILLIAM G. LENNOX, M.D., BOSTON, MASS.

Since the last meeting of this section, I have used two drugs which differ greatly in therapeutic and side effects, but which are welcome additions to the weapons designed to hold epilepsy in control.

First in point of time is trimethyloxazolidine dione. This drug was synthesized by Spielman of the Abbott Laboratories. There Richards and Everett(1) demonstrated that the drug protected animals against induced convulsions. Contrary to expectations aroused by the animal experiments, I have found this compound of little or no value as an anti-convulsant in patients, but peculiarly effective in the control of seizures of the petit mal type: pykno-epilepsy, myoclonic jerks, and akinetic epilepsy(2). To date I have treated 230 patients for a period long enough to judge results. Of these, 150 had petit mal, 30 had psychomotor seizures, and 50 had grand mal. (37 had both frequent petit mal and grand mal.)

Of the 150 patients who had one or more of the petit mal triad, 33 percent have been freed of this form of seizure from one to 15 months; 30 percent have experienced a reduction of more than three-fourths of their seizures: 21 percent were moderately improved; 13 percent were unchanged and 3 percent were worse. Thus 84 percent were to some degree better.

Patients, who are promptly and completely freed of petit mal, or their parents, say, "It seems like a miracle." The physician who has vainly tried both standard drugs and "new discoveries" shares this feeling. Unfortunately, a minority of patients are either not helped or have to discard tridione because of its side effects. Because petit mal is predominately a disease of childhood and because the majority of epileptics in state institutions enter as children, this drug should be

especially welcomed by the personnel of epileptic colonies and hospitals. The cost is greater than phenobarbital or dilantin, but in favorable cases dosage can be reduced or even cancelled.

Results with other types of seizures have, in my experience, been discouraging. Of 30 patients having frequent psychomotor seizures, 44 percent were in some degree better, but 56 percent were not improved, or even had more seizures; only 5 (17 percent) had been seizure free for a significant period of time. Because of the fact that psychomotor seizures, compared with petit mal, recur at longer and more uncertain intervals, results cannot be judged as quickly. For example, a high school boy was having two or three psychomotor seizures weekly. For more than a year he was given phenobarbital, dilantin, tridione, or methyl phenylethyl hydantoin without any relief. On a combination of dilantin and tridione, he had a remission of seven weeks, and was placed in the "freed" group. Then in spite of a continued maximum dosage of these two drugs, seizures returned at their accustomed frequency and he was listed as "somewhat improved." Tridione used alone is useless and when combined with anticonvulsants, as was the case in these patients, one cannot be sure which drug should receive credit for any benefit observed. DeJong(3) has ascribed the benefit of combined therapy to tridione. Because many physicians have reported relief of psychomotor seizures with dilantin alone, and none has reported benefit from tridione alone, the burden of proof would seem to lie on the proponents of tridione.

In patients having frequent grand mal, results have been generally negative. There would seem to be no excuse for advertising tridione to physicians as "a new anticonvulsant." Among 50 patients having grand mal frequently enough to judge the effects of treatment, only 16 percent had fewer grand mal, while 50 percent had more. Patients who had a history of both petit mal and grand mal were given phenobarbital or (if neces-

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

From the Department of Neurology Harvard Medical School and the Children's and Infants' Hospital of Boston, Mass. No. XLVII in a series entitled "Studies in Epilepsy."

sary) diphenylhydantoin in addition to the tridione. Experience is the only guide in deciding whether the combination should be continued in these complicated cases.

Of the side effects, skin reactions were encountered more often than with phenobarbital or diphenyl hydantoin. There was either a generalized measles-like rash or minute, hard papules in the skin of face or forehead. One patient had erythemia multiforme with leucopenia and fever. In all but a few instances, tolerance to the drug could be established by first withdrawing it and then giving small and slowly increased amounts. Photophobia proved troublesome in approximately one-third of the cases, but required discontinuance in only a few. A sedative effect might be noted with larger doses in some patients, whereas other patients became more active and irritable. In many of the patients made seizure free, improvement in school work, in disposition and in general well being has brought joy to the parents.

Having been used less than two years, statement regarding the long term good or bad effects of tridione cannot be made. Encouraging is the fact that when patients are made seizure free their electroencephalograms are also improved. When both clinical seizures and subclinical petit mal electroencephalographic discharges have been absent for several months, medication has been discontinued. In some cases seizures have returned after an interval of weeks or months. Other patients have remained seizure free. Tridione is now "on the market."

Aside from clinical results, the fact that relief is very largely confined to seizures attended by a certain peculiar formation of the brain waves (an alternate spike and wave) opens new vistas for investigation into this most disconcerting but intriguing disease.

METHYL PHENYL ETHYL HYDANTOIN

The effect of this drug, developed by the Sandoz Company and to be called mesantoin, has been tested by my associate Kozol in 104 patients.² Sixty percent of his group experienced an average reduction of 90 percent in the number of their major seizures.

² Reported in this issue of the JOURNAL.

My own series of 35 cases is much smaller and consists of private patients only.

The task of evaluating the effect of drugs on petit mal is easy because the experimental drug has no competitor, for no drug has been of proven value. In the case of grand mal or psychomotor seizures, however, the new medicine has not only to demonstrate its anticonvulsant properties, but must prove to be more effective than phenobarbital or diphenyl-hydantoin. Methyl phenyl ethyl hydantoin was given to 35 patients, aged from three to 45 years, without regard to their type of seizure. Fifteen had grand mal only, 7 petit mal only, 8 a combination of these two forms, 2 had psychomotor seizures only and 3 combined grand mal and psychomotor attacks.

As for results, 11 percent had been free of major seizures for a significant period; 17 percent were greatly improved; eight percent somewhat improved; 50 percent were unchanged and 14 percent had more frequent seizures. Electroencephalograms were made of all patients. Slow or fast wave frequencies predominated in patients helped the most, whereas none having spike and wave discharges were relieved.

The 28 percent of patients who were free of seizures or very greatly improved, is less than one-half the 60 percent obtained by Kozol. Several explanations may be given for this. First, my group included 7 patients with pure petit mal, none of whom experienced benefit. Excluding these patients, 36 percent of other patients were greatly helped. Second, doses used were moderate, only rarely exceeding 0.6 gram daily. Third, in order to determine its relative value, methyl phenyl ethyl hydantoin was used as a substitute for phenobarbital or diphenyl hydantoin and not in combination with one of these. Kozol found that combinations could be profitably employed. Finally Kozol was less ready to stop trial of methyl phenyl ethyl hydantoin in the face of unpleasant side effects.

Of 12 patients who discontinued medication because of side effects, five (or 14 percent of all cases) had a generalized, measles-like rash. Excessive fatigue, sleepiness, gastric symptoms or ataxia accounted for the others. Side effects which may prove trouble-

some with diphenyl hydantoin, hypertrophy of the gums, extreme ataxia, and hirsutism were not observed with this new drug. As with all new drugs the long range value can be determined only by time.

Case histories of certain more favorable cases follow:

A 46-year-old lawyer (H. M.) had 22 convulsions in the past eight years, eight of them in the last year, in spite of taking diphenylhydantoin 0.5 gram and phenobarbital 0.13 gram daily. He has been free of seizures during the year that he has taken 0.6 to 0.7 gram daily of methylphenyl ethyl hydantoin.

A boy of 15 (A. G.) with evidence of birth injury had seizures for nine years, a total of approximately 70 grand mal and 2,500 psychomotor, the latter recurring five to 10 times a week. During five months while taking 0.6 to 0.8 gram daily he had no attacks, but psychomotor seizures recurred when the dose was reduced to 0.4 gram.

A boy of 12 (J. T.) has had frequent, left sided jacksonian seizures for eight years, for which no cause could be found. They varied in severity, but in some form recurred from one to 20 times daily, mostly in relation to sleep. Of the many drugs tried, dilantin somewhat reduced the frequency of seizures, but caused intense hypertrophy of gums. Methylphenyl ethyl hydantoin has been used for 14 months. A dose of 0.8 gram daily reduced seizures from several hundred to several a month but could not be maintained because of drowsiness, dizziness and anorexia. On a dose of 0.5 gram daily plus .03 gram phenobarbital seizures recur about once a day. Recently following the addition of a preparation of mixed vitamins, appetite, weight and spirits have improved sharply.

A married woman of 39 years (H. M.) has had nocturnal seizures for 20 years, at first infrequently, but now three to six times a night. These are nightmare-like affairs. The presence of a heavy emotional overlay and normal electroencephalograms argued for hysteria. However a brother with unquestioned epilepsy, the presence of tongue biting and injuries from falling from bed, as well as freedom from seizures while taking dilantin seemed to require a diagnosis of epilepsy. Dilantin could not be continued because of the intense fatigue and sleepiness which it caused. With the use of .6 to .8 gram of methyl phenyl ethylhydantoin nocturnal seizures continue but at only a third of the former frequency and there are no unpleasant side effects.

A married woman of 23 years (J. B.) had about 25 grand mal in the past five years. In addition about 15 times a month she had aura of an attack; brief periods of inability to speak with tightening of the jaws but with full retention of consciousness. Five years ago Dr. Dandy had removed an exostosis from the inner table of the skull. Dilantin and phenobarbital gave only temporary aid. While taking 0.3 to 0.4 gram of methyl phenyl ethyl hydantoin and 0.06 gram phenobarbital seizures

were entirely absent for five months, but recently the aura returned with pregnancy.

Comment.—Each of three principal anti-convulsants, bromides, phenobarbital and diphenyl hydantoin proved its unquestioned superiority over predecessor drugs. Methyl phenyl ethyl hydantoin will not supersede diphenyl hydantoin in the majority of patients having major seizures. However, even if, as in my experience, only a third of convulsing patients find greatest relief of symptoms from the use of this new drug, it will be welcomed as an ally in the fight against a disease with such protean manifestations.

Conclusions.—Two new drugs increase the range and the effectiveness of the control of epileptic seizures.

Trimethyloxazolidine dione (tridione) used alone has proved wonderfully effective in controlling seizures of the petit mal triad; petit mal (pykno-epilepsy), myoclonic jerks and akinetic seizures. In contrast, grand mal convulsions were not helped or were made worse. Psychomotor seizures were occasionally aided by tridione combined with an anticonvulsant drug.

Methyl phenyl ethyl hydantoin (mesantoin) used in 35 patients, did not help petit mal, but in approximately one-third of patients subject to frequent major seizures it has replaced diphenyl hydantoin (dilantin) with profit, the benefit resulted either from a reduction in the frequency of convulsions or from an absence of the unpleasant side effects of either muscular incoordination or gum hypertrophy. Generalized rash or somnolence were side effects which limited the usefulness of the drug in many patients.

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NOTE.—Since this report was given one of the patients taking these two drugs died of aplastic anemia. Blood of patients taking tridione should be examined at intervals to determine the abundance of platelets and the total number and differential count of leucocytes.

FURTHER OBSERVATIONS ON THE USE OF TRIDIONE IN THE CONTROL OF PSYCHOMOTOR ATTACKS¹

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One should beware of optimism in reporting the efficacy of any new drug. There are many conditions, however, which have been so baffling from a therapeutic standpoint that any possible clue to their amelioration or cure should be made public in order that a thorough investigation may be carried out by impartial observers.

Many advances have been made in recent years in the treatment of the convulsive disorders. The bromides, later phenobarbital, and more recently sodium diphenylhydantoinate have proved to be quite effective in the treatment of grand mal seizures, and in many instances these major attacks can be adequately controlled. Petit mal attacks, however, and psychomotor seizures, the two other most frequent manifestations of the cerebral dysrhythmias, have defied therapeutic approach, and the usual anticonvulsant drugs have not been effective in controlling them. Bromides or phenobarbital may even induce amnesic or psychotic-like episodes or may increase the frequency of petit mal and psychomotor attacks. Sodium diphenylhydantoinate has been reported to be of value, as had glutamic acid, but in our experience neither of these has been very effective.

Tridione (3,5,5-trimethyloxazolidine-2,4-dione, Abbott) is an entirely new compound possessing analgesic properties. It has also been found to have hypnotic action, to be effective in the control of convulsions produced in experimental animals by the use of toxins, and to raise the electrical threshold at which convulsions appear in rats(1). In human beings tridione possesses analgesic and mild sedative action. Recently Lennox (2) and others have reported that tridione is of more benefit in the relief of petit mal seizures than any other therapeutic measure yet tried. Thorne(3) has reported its use in

mentally defective institutionalized epileptics; in large doses it proved to be an effective anticonvulsant and to exhibit marked sedative action.

A preliminary observation has been presented on the use of tridione in the control of psychomotor seizures(4). This study has been continued to include a larger number of patients, and the patients have been followed over a longer period of time. More prolonged observation confirms the original impression that tridione is effective in the control of psychomotor seizures as well as in the amelioration of petit mal attacks, but certain additional conclusions should be reported.

The therapeutic effect of tridione has been studied in some 60 patients with various manifestations of paroxysmal cerebral dysrhythmia over a period of nearly one year. Interest has been directed predominantly toward patients with psychomotor seizures, and in 28 of the patients these were the outstanding clinical manifestations. Most of these patients, however, were also subject to grand mal or petit mal attacks, or had electroencephalographic evidence of a mixed type of disorder. In many instances the grand mal attacks had been fairly adequately controlled by phenobarbital and/or sodium diphenylhydantoinate, but in none were the psychomotor attacks controlled by these drugs. Of the 28 patients with psychomotor attacks who were studied for long enough periods of time for appraisal, 3 (10.7%) had psychomotor attacks alone; 22 (78.6%) had psychomotor and grand mal attacks, and 3 (10.7%) had psychomotor and petit mal attacks.

Statistical results in the use of tridione in psychomotor attacks show that in 7 of the patients (25%), the seizures were completely controlled by the use of tridione. In one patient who had only psychomotor attacks tridione alone was effective, but in the other 2 patients who had only psychomotor seizures a combination of tridione and sodium diphenylhydantoinate was necessary. The other 4 patients who were completely

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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controlled had both psychomotor and grand mal attacks, and a combination of tridione with either sodium diphenylhydantoinate or phenobarbital was necessary for complete amelioration of both types of seizures. In 17 patients (60.7%), 15 with psychomotor and grand mal attacks and 2 with psychomotor and petit mal attacks, tridione in combination with sodium diphenylhydantoinate and/or phenobarbital brought about definite improvement but not complete amelioration. In some of these patients observation over an insufficiently long period of time suggested that there had been complete control of the seizures, but more prolonged observation showed that the attacks were decreased in frequency but not completely eliminated. In every instance, however, the improvement in the psychomotor attacks was more evident than was the amelioration of the grand mal seizures. In all of these individuals the attacks were definitely reduced in frequency and in severity, and many patients, incapacitated previously, were able to resume gainful employment. In 4 patients (14.3%) the tridione, even in combination with the other anticonvulsant drugs, was not effective in the control of seizures. Three of these patients had psychomotor and grand mal attacks, and one had psychomotor and petit mal attacks. In every instance in which tridione was effective it not only reduced the frequency of the seizures or stopped them completely, but it also observed to bring about a definite psychologic improvement, and to relieve the irritability and confusion that are sometimes present between attacks.

Toxic symptoms, all of slight clinical significance, were noted in only 6 of the above patients. Two noticed slight fatigue and drowsiness; one noted visual symptoms, consisting of sensitivity to light and blurring of vision; and one noticed blurring of vision plus drowsiness. Among the 4 patients who failed to respond to the therapy, 2 experienced an increase in grand mal attacks. Among the total group of 60 patients, however, many of whom had principally grand mal attacks, these toxic symptoms were somewhat more frequent, and a total of 6 noted an increase in grand mal attacks, while 4 observed visual symptoms. A skin eruption appeared in one patient.

CONCLUSIONS

On the basis of the above observations, certain conclusions may be reached. The most important of these are as follows:

Tridione is an important adjunct in the therapy of the cerebral dysrhythmias, especially in the treatment of psychomotor seizures. While it may completely control the attacks in certain instances, it has not proved to be quite as successful as our earlier report suggested. It is, however, the most significant addition to date in the drug therapy of seizures of this type. Used alone it is effective in certain instances, but it is most helpful if used in combination with sodium diphenylhydantoinate and/or phenobarbital. Possibly a regulation of the dosage of the various anticonvulsant drugs to suit the individual patient may afford the most complete relief. It is of interest that many seizures which had been previously interpreted as atypical grand mal attacks which did not respond to the usual anticonvulsant medication were found on closer observation to be psychomotor attacks. Many of these were controlled by the use of tridione. Tridione therapy results not only in an amelioration of the attacks, but also in the relief of the irritability and confusion that are sometimes present between attacks.

Tridione does not appear to be of value in the treatment of grand mal attacks, and it may bring to the fore or precipitate grand mal seizures if used alone.

Tridione is an important adjunct in the therapy of petit mal attacks, especially if used in combination with other anticonvulsants.

Tridione has failed to be effective principally in cerebral dysrhythmias secondary to organic cerebral disease. In the 4 patients with psychomotor seizures in whom the drug was of no value, 2 had developed their attacks following a brain abscess, one had developed the seizures following a severe head injury, and one had psychomotor attacks in association with other manifestations of a degenerative cerebral disease.

Toxic symptoms occur in occasional patients who show clinical response to tridione, but in most instances these do not constitute a serious contraindication to the use of the drug, and most patients continue with its use in spite of these minor complications.

SUMMARY

Tridione, a new addition to the treatment of the cerebral dysrhythmias, is helpful in the control of psychomotor seizures. While effective in certain instances if used alone, it is most helpful if used in combination with sodium diphenylhydantoinate and/or phenobarbital.

Toxic symptoms are infrequent in patients who respond to the drug, and do not constitute an important contraindication to its use.

Further research on the oxazolidine-2,4-dione derivatives and related drugs may afford further advances in the therapy of epilepsy.

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INCIDENCE OF NEUROPSYCHIATRIC DISEASE IN THE DEMobilIZED VETERAN

A STUDY OF 10,000 ARMY SEPARATEES

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The military neuropsychiatrist has never played a more important rôle than in this emergency, and the Army Medical Corps has good reason to be proud of its psychiatric program(1). The psychiatrist has been assigned to medical units as an integral part in almost all echelons of army organization. The soldier made his first contact with him at the induction center where many actual or potential neuropsychiatric cases were eliminated(2, 3, 4). Then, as the soldier faced the stresses and problems of adjustment incidental to being a part of a complicated organization as well as to the stress of combat, psychiatric attention was available throughout. In this way, an elaborate and continuous neuropsychiatric screening process was established.

With hostilities now at end and rapid demobilization taking place, there is considerable speculation in both the professional journals and popular press as to the incidence and severity of neuropsychiatric "adjustment problems" and frank neuropsychiatric disorders in the returning veteran. There can be little doubt that this problem has been overemphasized, but this overemphasis has served a useful purpose in stimulating the public and medical profession to ask for improved facilities for the assistance of those veterans who have psychological and emotional problems. The purpose of this paper is threefold: (1) To determine the frequency, nature and cause of these problems, (2) To determine the amount of assistance likely to be needed by the discharged veteran in finding a solution to his readjustment difficulties, and (3) To study prognostic factors by evaluating the status of neuropsychiatric cases at the time of discharge who were diagnosed, treated and returned to duty prior to demobilization.

A vital fact to be considered is that soldiers

who are to be discharged under demobilization regulations are figuratively speaking "well men." They have been through considerable stress and have more or less successfully met the physical and emotional problems of army life during a period of hardship and combat. The mentally and physically ill are not included in this study as they are discharged from the Army through the hospitals.

METHOD

Unit A of the Army Service Forces Separation Center at Camp Atterbury, Indiana, is organized to examine and discharge 120 or more men per hour for 17 hours daily. From the vast number processed by this center, the authors have examined the records of 10,000 soldiers separated from the Army under the adjusted service ratings in existence during December 1945 and January 1946. These represented men between the ages of 20 and 35, most of whom had seen combat in one or more theaters of the war or who had been overseas and had had 3 or more years service. Commissioned officers and members of the WAC were not included. The majority of men were from the States of Michigan, Indiana, Kentucky, Ohio and West Virginia and were representative of the population of those states.

The examination of these soldiers was performed in the manner prescribed by appropriate Army Technical Bulletins. Each man was given a medical form headed with his name, rank, address and serial number. He was then given an orientation lecture at which time he was advised to have all medical and dental care done prior to being separated from the Army. He was urged to disclose all illnesses and injuries suffered while in the Army and was advised of his right to

file a claim for disability pension. He then proceeded through a series of examining rooms designated as medical stations. At each station, a medical officer completed an assigned part of the physical examination, made his entry on the medical form and advanced the separatee to the next medical officer on the processing line.

A medical and psychiatric history was taken at the first station by trained enlisted and civilian personnel under supervision of a medical officer. Additional questions were asked by medical officers as the examination progressed and it is believed that a satisfactory history was obtained in almost every case. Each soldier was specifically asked if he was ever treated or reclassified because of "nervousness," psychoneurosis, "combat fatigue" or "nervous breakdown" and whether he had any such complaints at that time. Each was asked specifically if he had "inward or outward nervousness" since that question seemed to receive positive response from the greatest variety of reaction types. He was also asked concerning chronic fatigue, depression, irritability and whether he had ever been court martialed or appeared before special boards. Further questioning was at the discretion of the interviewer and depended upon the appearance and behavior of the separatee. In all cases, any positive response or observation was recorded for the psychiatrists' attention. Soldiers with a multiplicity of somatic complaints or specific complaints in which any of the medical examiners felt that there was a large psychogenic element, were also referred to the psychiatrist. In addition, many soldiers saw the psychiatrist at their specific request.

At the last station the medical examination form was carefully scrutinized for positive findings and if none were present the examination was considered completed. In the event positive findings were present, the man was referred to a review board composed of three medical officers, one of whom was a psychiatrist, for final medical opinion and appropriate disposition. The reviewing psychiatrist was in each instance one of the authors.

The interview took place in the separate room used by the review board which pro-

vided for ample privacy and quiet, thus insuring a satisfactory talk. Enough time was devoted to each soldier to enable the psychiatrist to arrive at a satisfactory diagnosis(5). In a few cases of sufficient severity, the final decision was postponed and the man sent to the neuropsychiatric clinic of Wake-man General Hospital located nearby for further observation and consultation or diagnostic procedures not available to the authors. Cases diagnosed as psychosis or severe psychoneurosis were hospitalized directly. As prescribed by army regulations, diagnoses were recorded only when they were agreed upon by a board of three medical officers, one of whom was the psychiatrist.

In compiling data such as presented here, the necessity of adequate terminology and diagnostic standards cannot be too strongly stressed. Obviously, the figures would be valueless if every soldier who claimed that he was "nervous" or had a "nervous stomach" were classified as neurotic. There was also a strong moral and legal obligation for careful evaluation because of the nature and circumstances of the examination. There is still a great deal of stigma attached to a neuropsychiatric diagnosis and to give a soldier such a label a few hours before he returns to civilian life can be grossly unjust, if it is not deserved. On the other hand, diagnosing a condition which may be disabling in later life insures the veteran of compensation to which he might be entitled. The converse of this is also true for there is obligation to protect the government. To meet these problems, the writers adhered closely to the terminology and diagnostic standards set by the Surgeon General's Office in Army Technical Bulletin, TB Med 203, amplifications of such criteria as elucidated in the publications of the School of Military Neuropsychiatry, and in doubtful cases, standard textbooks. A diagnosis required definite objective and subjective manifestations. The term psychoneurosis was never used as a diagnostic term, instead the specific reaction type was named. Diagnoses were recorded under four headings: (1) The diagnosis and manifestations, (2) The precipitating stress, (3) The predisposition,

(4) The incapacity. For example, a diagnosis was recorded as follows:

Diagnosis: Anxiety reaction, chronic, mild severity manifested by insomnia, palpitations, tachycardia, hyperhidrosis and trembling.

The precipitating stress: Severe, 45 days intensive combat as an infantryman terminated by multiple shrapnel wounds.

Predisposition: Soldier has always been stable and well adjusted. No predisposition evident.

Impairment of Functional Capacity Due to the Psychiatric Disorder: None.

In many cases, all factors could not be fully evaluated. These were recorded as "not determined." If there were any evidences of latent tendencies or symptoms suggestive of a future disability, these were recorded

whenever possible. The ease of rapport and the confidence the man had in the psychiatrist is a tribute to the good name the military neuropsychiatrist has earned. Most of the men were given some reassurance regarding their complaints or enough insight to permit them to seek further psychiatric guidance in civilian life.

DATA

A total of 644 of the 10,000 separatees investigated came to the attention of the psychiatrist by the manner described. Of this group, 540 men (5.40% of the sum total of men) had subjective complaints. The re-

TABLE 1

INCIDENCE OF PSYCHIATRIC COMPLAINTS AND DISORDERS AMONG 10,000 TYPICAL SEPARATEES

	No.	Percent
I. Separatees examined	10,000	100.00
II. Separatees reaching attention of psychiatrist.....	644	6.44
III. Separatees with subjective complaints suggestive of psychiatric disorder.....	540	5.40
IV. Separatees with record of a previous psychiatric diagnosis made while in the Army	204	2.04
a. Those having no psychiatric illness at present.....	104	1.04
b. Those with present illness.....	100	1.00
V. Separatees on whom a psychiatric diagnosis could be made.....	257	2.57
a. Those with estimated partial disability from such condition.....	51	0.51
b. Those without evidence of disability.....	158	1.58
c. Those in whom the presence or absence of disability could not be determined prior to return to civilian life.....	48	0.48

for the veteran's future protection even though a psychiatric diagnosis could not be made at that time.

Most soldiers answered questions readily. Those who exaggerated their symptoms in hope of compensation were few; they were easily detected as they presented few of the objective and subjective signs and symptoms necessary for a diagnosis. There were probably a few soldiers that refused to complain because of "pride" or because of fear that their discharge would be delayed. All men were assured that there would be small likelihood of any delay and that it would be greatly to their advantage to have all complaints recorded. The effectiveness of this assurance was seen in the uninhibited response to the interviewers' questioning.

The danger of inflicting psychic trauma by a diagnosis repugnant to the individual was avoided by the use of cryptic abbrevia-

tioning 104 were seen only because of a previous history of neuropsychiatric disorder and not because of complaints.

Table 1 shows the further subdivisions of these figures. There were 204 separatees who had previously been patients in army hospitals or installations for neuropsychiatric disease and who had been treated because of such ailments. Of this group, 104 were found to be completely symptom free and 100 to have residual symptoms. So few of the 10,000 records studied showed a history of hospitalization or treatment for neuropsychiatric disorder in civilian life that they were not an important group. Evidently such men were eliminated at induction centers or in army hospitals. Actually, only three such cases were encountered. This figure is interesting in view of the fact that a much higher percent of army neuropsychiatric hospital patients have a history of

civilian hospitalization (personal observation of authors).

Altogether 257 men (2.57%) presented sufficient evidence to merit a psychiatric diagnosis and of these, only 51 men (0.51%) definitely had any disability.

Table 2 shows the incidence of the different neuropsychiatric diseases encountered, the number of men having each condition, and the different categories of disability. The term disability has been interpreted to mean

separation. A total of 24 psychogenic somatization reactions were observed, all of which were diagnosed on positive criteria of psychogenic disturbance rather than by exclusion of organic disease alone. There was a group that had recently recovered from true organic disease but still presented some of the symptoms of such disease. These were considered residuals of the disease and the soldier regarded as still in a convalescent stage. An appropriate neuropsychiatric

TABLE 2

TYPES AND FREQUENCY OF PSYCHIATRIC DIAGNOSES ENCOUNTERED IN THIS STUDY

Diagnosis	Total	Without disability	With mild disability	With moderate disability	With disability not determined
Anxiety reaction	190	135	30	6	19
Conversion reaction	9	4	5	0	0
Phobic reaction	2	2	0	0	0
Neurotic depressive reaction.....	1	0	1	0	0
Psychogenic gastrointestinal reaction....	13	9	3	0	1
Psychogenic genitourinary reaction.....	1	1	0	0	0
Psychogenic cardiovascular reaction.....	7	3	1	0	3
Psychogenic respiratory reaction.....	1	0	1	0	0
Psychogenic asthenic reaction.....	2	1	1	0	0
Neuropathic traits residual of amoebiasis.	1	0	1	0	0
Neuropathic traits residual of malaria...	3	0	0	0	3
Neuropathic traits attributed to wounds..	2	0	0	0	2
Concussion, cerebral, residual of.....	12	2	1	1	8
Mental deficiency, primary.....	3	0	0	0	3
Schizoid personality	3	0	0	0	3
Schizophrenic reaction, latent.....	1	0	0	0	1
Emotional instability	1	0	0	0	1
Immaturity with symptomatic habit reaction (stammering)	1	0	0	0	1
Immaturity with symptomatic habit reaction (enuresis)	2	0	0	0	2
Passive dependency reaction.....	2	1	0	0	1
Total of all diagnosis.....	257	158	44	7	48

only the degree of ineffectiveness resulting from the current psychiatric illness. Where it could not be determined, it is so stated. No conjectures were hazarded as to future disability except as a matter of record in a few cases. In a small number of cases, two or more diagnoses were used. These were tabulated under the more significant diagnostic category. One hundred ninety cases were classified as anxiety reaction (anxiety state) and of these, 36 showed definite partial disability. Conversion reactions were not numerous probably because such conditions being of a more tangible nature found their way into the hospital for treatment prior to

diagnosis was given if warranted. The diagnosis of concussion was made on a history of true head injury and not "shell shock." There are few or no men listed under the categories of the more severe conditions. It should be apparent that most men in these categories would not be ready for demobilization unless they had been treated or well on the way to recovery. Nevertheless, there were a very few men seen during the period of this study who are not included in any of the tables because their discharge was deferred pending treatment. These represented the group where psychosis or severe psychoneurosis was diagnosed. This group is

small but of some interest. Some of these men made a satisfactory adjustment in the Army for 3 to 4 years in spite of their disorder and it is ironic that they should be diagnosed a few minutes prior to separation. They were all directly hospitalized for treatment.

Table 3 summarized the findings of the 204 men who had a previous history of psychiatric disorders while on army duty. Of these, 174 had been hospitalized while

COMMENT

Despite the widespread fear expressed in the lay press, the number of soldiers presenting psychiatric problems upon returning to civilian life is small. This percentage appears even more favorable when compared to the estimated incidence of neurosis in the general civilian population as shown by the neuropsychiatric examination in the induction centers (2, 3, 4). The figures given here are not considered an index to the neuro-

TABLE 3

SUMMARY OF CASES WITH PREVIOUS HISTORY OF NEUROPSYCHIATRIC DISORDER

	No.	Percent
Number of such cases encountered in this study.....	204	100.0
Those which had been hospitalized.....	174	85.3
a. Cases attributed to combat stress.....	115	56.8
b. Cases attributed to stress other than combat.....	49	24.1
c. Cases in which stress could not be determined.....	9	4.4
Those which had not been hospitalized.....	30	14.7
a. Cases attributed to combat stress.....	15	7.4
b. Cases attributed to stress other than combat.....	13	6.4
c. Cases in which stress could not be determined.....	2	0.9

TABLE 4

PRESENT STATUS OF CASES WITH PREVIOUS NEUROPSYCHIATRIC DIAGNOSIS EVIDENTLY RETURNED TO DUTY AS RECOVERED OR IMPROVED

	No.	Percent
I. Combat precipitated cases.....	131	100.0
a. Evidently fully recovered.....	77	58.8
b. Still symptomatic.....	54	41.2
II. Cases precipitated by stress other than combat.....	62	100.0
a. Evidently fully recovered.....	21	33.8
b. Still symptomatic.....	41	66.2
III. Cases in which stress could not be determined.....	11	100.0
a. Evidently fully recovered.....	5	54.5
b. Still symptomatic.....	5	45.5

in the Army and among them 116 were definitely combat precipitated cases. Those cases not precipitated by combat, or where the precipitating stress was indeterminate, form individually smaller groups. Only 30 men, of whom 15 were combat precipitated cases, had a previous history of psychiatric disorder without hospitalization.

Table 4 shows the status of the above group at the time of this examination. A greater number of the cases precipitated by combat stress benefited by treatment and became symptom free than those precipitated by stress other than combat.

psychiatric disorders the veteran will present in future years, but they do show that the great majority of men discharged from the Army have no psychiatric problems of any significance. Many cases presented problems which were incidental rather than as a result of their service. A few had strong guilt feelings because of "misdeeds" committed while away from home and headed returning to their wives or to a strict parental environment. There were some who had marital problems caused by long absence from wives while many others had found the Army a haven from intolerable family or

social problems with which they were again confronted.

Many of these problems will undoubtedly resolve without help, but others will require further psychiatric aid(6). Although the percentage of men with neuropsychiatric disability is small, the total number is not negligible. The Army Medical Corps has done an excellent job in promoting psychiatry in the eyes of millions of its men. These men no longer feel that only a "psycho" sees the psychiatrist. From the experience gained here where several hundred thousands of men have been seen, there is no doubt that the psychiatrist has been accepted wholeheartedly. When these men are troubled with psychiatric problems in the future, they will expect skilled professional assistance within easy availability as they have had in the Army. There will be not only those conditions disabling at present, but also those minor problems which might form the nucleus of a more serious disorder later which could be prevented.

While those cases with mildly disabling psychiatric syndromes were offered hospital treatment at the time of discharge, it was usually refused. Hospital treatment was not often indicated because it is time consuming and would keep the patient from home and work much against his wishes. Moreover, aid in adjustment is likely to function best if given as an outpatient service in civilian environment.

Of the men who were seen because of a history of previous hospitalization for neuropsychiatric reasons, a little over half had no complaints at the time of separation. This certainly indicated the effectiveness of the reconditioning program in a large number of men. It is also of interest to note how many more complaints were received from men whose disorder was not combat precipitated. Although the figures are inadequate to draw definite conclusions, they reiterate the principle that personalities yielding to a greater stress are basically better integrated than those yielding to a lesser stress(7). This is further borne out by the total figures showing that in those men with no previous psychiatric history, fewest complaints were recorded, while in those with a previous

army psychiatric history, the number of complaints was the highest where the precipitating stress was the least.

This study does not include the more serious mental diseases. All such cases are given treatment until maximum benefit is obtained and many of them are finally discharged through medical channels. This group forms only a small portion of the Army whereas the men studied here are discharged under demobilization regulations and are representative of the greater bulk of the Army.

The ease with which these cases fit into army diagnostic groups showed the advantage of the terminology and its standard use. The four part diagnosis including manifestations and severity, provides a clear summary of the patient's disorder.

CONCLUSIONS

1. The neuropsychiatric study of 10,000 separtees demobilized under the regulations existing during December 1945 and January 1946 showed that only 257 men (2.57%) had sufficient complaints to warrant a neuropsychiatric diagnosis. Of these, 51, or 0.51%, had a disorder sufficient in severity to cause them some degree of incapacity.

2. The lay press has overestimated the psychological problem of the veteran upon returning home.

3. Those cases whose neuropsychiatric disorders were precipitated by combat show a better response to reconditioning and had fewer complaints upon separation than those whose disorder was precipitated by factors other than combat.

4. The disorders discussed in this paper present a group for which hospital care is neither necessary nor desirable. The veteran has learned to accept the psychiatrist while in the Army and will expect skilled professional assistance within easy availability when out of the Army.

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REHABILITATION OF MILITARY OFFENDERS AT THE NINTH SERVICE COMMAND REHABILITATION CENTER

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The rehabilitation of the sick and wounded is one of the outstanding medical contributions of the war, and its publicity is richly deserved. Equally prominent but less well recognized has been the reclamation of many thousand casualties of another type—the soldiers sentenced to confinement by general court-martial. As ineffectual for combat as the most disabled of the sick and wounded, they constituted an appreciable loss of manpower; and their reclamation is a brilliant chapter in the history of the war. The offenses were not heinous for the most part, and the offenders were salvable youths whose services could ultimately be utilized. They were gathering in large numbers, creating a vexing problem. Guardhouses were overcrowded and housing was inadequate. At a time when trained soldiers were needed most, these offenders were marking time and deriving questionable benefits from confinement.

On 14 September 1942, the Commanding General, N. S. C., created the "Disciplinary Training Camp" at the Fair Grounds in Turlock, California, and all general prisoners within his jurisdiction were transferred thereto, relieving the congestion at the guardhouses, and simultaneously ensuring the prisoners' uninterrupted training. Garrison prisoners (sentences imposed by minor courts-martial) also were sent for training but in a few months they stopped coming (when the guardhouse overcrowding had been relieved).

With the great mobility characterizing an army in the process of mobilization, it was difficult for many organizations to gather the *corpus delicti* necessary for conviction at courts-martial. Soldiers AWOL at great distances from their units were not returned for trial but were transferred to the disciplinary training camp and thus appropriate disciplinary action was not delayed. While awaiting trial, these men were being trained

and were not losing time in preparation for their future military careers. Their sentences imposed, they continued with their training until they were deemed to have benefited sufficiently to be restored to duty. Thus the ends of justice were served and, during the critical war emergency, the men could become valuable assets to their new units. The dishonorable discharge, one of the three forms of punishment imposed by general courts-martial, was suspended by the reviewing authority in most instances, making it possible for the service record and allied papers to accompany the prisoner to his next organization when he was restored to duty.

In November 1942 five key officers of each of these new installations went to the disciplinary barracks at Fort Leavenworth, Kansas, for training in military penal practice. The disciplinary training camp was then renamed "Detention and Rehabilitation Center," and as the new correctional methods became established and the training program stabilized, the name changed once more, and the camp became known as the "Rehabilitation Center" (RC), *thus emphasizing the rehabilitation aspect and ignoring the detention or punitive aspect.*

Also received for training were prisoners sentenced overseas. They came from Alaska, the Aleutians, Hawaii, China-Burma-India, the South Pacific, Australia and the Caribbean areas. In the closing phases of the war, when rehabilitation centers were well established overseas, the overseas prisoners who still came to the NSC rehabilitation center came only for temporary confinement, and to wait transfer to the disciplinary barracks.

When it was obvious that a prisoner would not succeed at the rehabilitation center, and that his restoration to duty was unlikely, he was transferred to the disciplinary barracks. Also transferred were prisoners whose dishonorable discharge had not been suspended by the reviewing authority. Their records had been sent to the Adjutant General and

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the technical and other obstacles to restoration were at first virtually insurmountable. Most of those whose dishonorable discharge had been suspended, whose courts-martial order designated the U. S. disciplinary barracks as the place of confinement (having been sent to the rehabilitation center only to await a vacancy at the disciplinary barracks) remained at the rehabilitation center for a sufficient period to be restored to duty and were not transferred to the disciplinary barracks.

For the non-restorable prisoners who gradually increased in number, appropriate segregation and work projects were provided. The two groups did not mingle. A 50-acre victory garden provided work and also helped alleviate the critical wartime food situation. While the branches of the disciplinary barracks did increase sufficiently to accommodate the increase in this type of prisoner, their activation lagged a good deal so that the percentage of non-restorables gradually increased until they constituted a third of the prisoners confined in 1944-45. While an occasional prisoner was confined for a period as short as 6 months, the great majority remained 9-10 months, a few had to remain for a year, and an exceptional case as long as 18 months.

In December 1943(1) instructions were issued that soldiers awaiting trial by general court-martial would be examined by a medical officer (a psychiatrist, if available) to look into their mental status to determine the type of institution in which they would be confined. To the disciplinary barracks were to be sent prisoners suffering from serious mental or neurological disorders such as: mental deficiency, psychopathic personality, major abnormalities of mood, psychoneurotic disorder, prepsychotic, postpsychotic and schizophrenic personalities, chronic alcoholism and drug addiction, syphilis of the central nervous system (neuro-syphilis of any form—general paresis, tabes dorsalis, meningovascular syphilis), sexual perversions, stammering to such a degree that the prisoner is unable to express himself clearly or to repeat commands. These examinations helped identify prisoners with serious disorders, but the rehabilitation center's problems did not diminish, for with space seldom

available at the disciplinary barracks such prisoners still came to the rehabilitation center in large numbers. For the most part they were not put through the rehabilitation program, but were utilized in farm work and in housekeeping assignments.

A psychiatrist compiled all reports for the psychiatry and sociology board (P & S Board). A sociologist prepared histories after interviewing prisoners and reviewing all their records. The post surgeon submitted physical examination reports, and a psychiatrist the psychiatric appraisal. Complete records were available for all prisoners when the psychiatry and sociology board interviewed them to determine their disposition. Sources of information included the family, former employers, former military organizations, the Federal Bureau of Investigation, local law-enforcing agencies, penal institutions where prisoners formerly had been confined, schools and other agencies. All prisoners had the benefit of a thorough investigation and study, and they were interviewed at various stages of training. At first they were seen five months after arrival (when restoration to duty was being contemplated). This procedure proved inadequate, and towards the end of the war prisoners' classification reports were prepared within a month after admission, and a second time two months later to check on their progress. At the third hearing, after completion of the full training program, final disposition was made and they were usually restored to duty two months later (9-10 months after arrival).

The psychiatry and sociology board (or clemency board) gradually changed in make-up as well as in name; in 1945 it was the "classification board" and comprised 5 officers ranking from lieutenant to lieutenant colonel. Some members attended every session of the board; others rotated. Five made a quorum. The post psychiatrist, or his assistant, was required to attend and was a board member.

In three years almost 8000 prisoners were processed. Though the restoration rate was 83% in 1943, it was subsequently reduced with a change in policy, and for 1943-45 it was 56%.

PSYCHOTIC REACTIONS(2)

Psychotic reactions were recognized in 361 prisoners (4.6%). Almost without exception these prisoners were sent to Hammond General Hospital where electroshock therapy induced satisfactory remissions in a large percentage. Of these, 14% were "prison psychoses"; and in them electroshock treatment produced best results. Their symptoms were mostly episodes of confusion, excitement and depression in various combinations. Recovered in 1 to 2 months, they were returned to the rehabilitation center but were not restored to duty, for as a rule their maladjustment had been lifelong and too profound to warrant believing that they could adapt to military life. At the NSC rehabilitation center, the incidence of psychoses was higher than that reported in others (0.6%, 0.7% and 1%, in three whose reports were available) but was lower than the 6% in Sing Sing psychiatric clinic's series of 2000 prisoners (this series having been selected as a civilian counterpart). Of the prison psychoses 63.7%, and of the other psychoses 90.4%, were recognized within 5 months of arrival. Fifty-two percent of the psychoses were detected in routine interviews. Medical officers suspected alienation and referred 19% to the psychiatrist, and non-medical personnel referred 28%. While many families requested examination in the belief that the prisoner was "out of his mind," only 1.4% of the psychotics were recognized in examinations requested in this manner.

Mental deficiency was an important etiological factor, for it was found in almost a fourth of the psychotics. Of the 308 psychotics whose hospital records showed psychometric test findings, 69 (22.4%) were rated "inferior" in their intelligence test scores. "Psychosis with mental deficiency" was the diagnosis made by the hospital's psychiatric staff in 21 of these 69 cases. The Bellevue-Wechsler and Rohrschach tests were used in all cases.

The racial factor was recognized as important, for of the latter group of 21, 16 were Negroes. Of the 69 psychotics with inferior intelligence, 56 (81%) were Negroes. Feeble-mindedness thus was associated with psychoses four times as frequently in the colored prisoners as in Cauca-

sians. Another significant observation is that the colored prisoners were three times more susceptible to psychotic breakdown than their Caucasian fellows since Negroes constituted only 15.8% of the total prisoners confined, but comprised 48% of the psychotics (of the records of the 361 psychotics, the race was mentioned in 346; and of these 166 were Negroes).

Habitual use of marijuana may have been a contributory factor in a few of the early psychotic breakdowns, for withdrawal symptoms seemed to be especially troublesome in these few cases. In 500 unselected consecutive social histories obtained through the Red Cross, 5 (1%) indicated that the subject was a known addict. The records of the 361 psychotics showed that specific inquiry had been made regarding the habitual use of the drug in 214 cases; and in these reports there was prior recorded evidence or an admission in an interview in 38 (17.8%). These were mostly Negroes from all sections of the country (mostly urban); the remaining few were of Mexican origin and came from the Southwest.

Their country's fortunes of war had a notable effect on the incidence of psychotic reactions among the rehabilitation center prisoners who were temporarily in a haven of refuge, immune from the hazards of war. Until the North African campaign (spring of 1943) very few psychoses were recognized. While United States soldiers were gathering in Britain and preparing for "D-Day," the number began to rise and perhaps a dozen were recognized quarterly. When the second front in Europe was imminent, the incidence rose sharply to more than 75 quarterly. It remained at that high rate until victory was apparent in the middle of the winter 1944-45, when the rate dropped precipitously to 28 per quarter. After "VE-Day" it was 25; and after "VJ-Day," 2. By way of contrast, in a hospital in a basic training camp the rate of psychotic admissions remained at about .44% until "VE-Day," when it dropped to 0.2% or half its former rate. The reduction in rate in the soldiers on duty was not nearly as precipitous as in the prisoners in confinement. The rehabilitation census remained between 1300 and 1700 most of the time. Other factors possibly in-

fluencing the development of psychotic reactions did not change appreciably. The type of offender, nature of the rehabilitation program, as well as the type and reac-

186 enlisted men discharged from an army hospital, (3) 100 veterans examined for pensions, and (4) 100 former officers at St. Elizabeth's Hospital:

Classification	(1) Prisoners, percent	(2) Soldiers, percent	(3) Veterans, percent	(4) Officers, percent
Dementia præcox	72.6	60.75	80.	35.7
Psychosis with mental deficiency.....	5.8	16.12	2.94	0.
Psychosis due to trauma.....	3.9	0.54	2.94	0.
Psychosis with epilepsy.....	0.83	0.54	0.	0.
Psychosis with other diseases of nervous system....	0.56	0.	0.	0.
Prison psychosis	13.85	0.	0.	0.
Psychosis unclassified type.....	1.69	7.53	5.7	16.7
Manic-depressive psychosis	0.	4.3	5.7	40.5
Psychosis with psychopathic personality.....	0.	7.	2.94	1.2
Alcoholic psychosis	0.28	3.23	0.	1.2
Dementia paralytica	0.	0.	0.	2.4

tion of the personnel with whom prisoners came in daily contact, remained unchanged. The program had been lengthened long before the wave of psychoses appeared, and it did not change in the 18-month period in which the rate of psychoses fluctuated so violently. Since the entire setting remained unchanged after "VE-Day," psychoses should not have decreased so rapidly with the ending of the war, if cessation of hostilities were not a decisive influence. But the truth of the matter is that *the fortunes of war did have a decisive influence on the prisoners; and the incidental mental conflicts and emotional stresses precipitated psychoses in the less well endowed prisoners; and aggravated the symptoms in the previously unrecognized psychotics to such a degree that detection became less difficult.* The conflicts incident to their confinement, while the ultimate outcome of the war was still in doubt, proved to be too much for many of them and they took flight from reality by developing a psychosis.

The type of prisoners seen at the RC did not change in the 3 years of its existence. At least half the prisoners showed no significant mental or emotional aberration. Statistical records of diagnoses were kept in 1945 and they showed the following percentages:

Diagnoses	Low, percent	High, percent
Psychopathic personality	23.5	42.
Mental deficiency	1.3	4.2
Chronic alcoholism	2.1	5.6
Psychoneurosis	2.8	7.4

The incidence of various types of psychoses in the RC (1) is compared with (2)

Very few psychotics had been overseas, even less had been in action, and only two or three had been wounded. Head injury was an insignificant and non-contributory factor.

In the prison psychoses 40 of 50 (80%) showed confusion; but only 10 of 21 (47.6%) of the "psychoses with mental deficiency" showed it. Depression was present in 21 of 50 (58%) in the former; and in 13 of 21 (62%) in the latter. None of the numerous attempts at self-mutilation nor suicidal gestures accompanying these depressions led to serious injury or death. Episodes of excitement occurred in 19 of the 50 (33%) prison psychoses, and in 13 of the 21 (62%) mental defectives. With few exceptions, these episodes occurred only after prisoners had been confined for some time (at least 5 months); but confusion and depression occurred both early and late in confinement.

The psychoses in prisoners resembled those seen in other soldiers in war time, as described in the literature of World Wars I and II. They differed from psychoses seen in civilian life in that they were more sudden and precipitous in onset, were relatively brief, and resulted in a favorable outcome more frequently. The cause and effect relationship between environmental stress and psychotic reaction often was clearly evident, especially in the reactions diagnosed "prison psychosis." Patients were hospitalized promptly, and there was excellent liaison with Hammond General Hospital 13 miles away. Psychotics whose breakdown was considered incidental to confinement, were returned to the RC when they recovered. In

the other psychoses, if the reactions were considered to have existed prior to trial, the sentences were mitigated, and the prisoners restored to duty and medically discharged for care and treatment in a non-military hospital.

As a rule psychotic reactions subsided within two months. When some of the patients were transferred to another hospital, they were frequently in such good condition on arrival that the receiving staff in many instances could find little if any evidence of psychosis. This was so noticeable that in some cases the diagnosis was questioned. Thus, in one group of 27, many of whom were in remission on arrival at the second hospital, an investigation showed that the service command neuropsychiatric consultant had verified the diagnosis in the acute phase of the illness in 21 cases. Incidentally, such experiences had been recorded in World War I.

The hallucinations of the psychotics at the RC showed the features described in psychiatric texts under "pseudo-hallucinations." These experiences were dream-like states involving multiple sensory spheres simultaneously. At times they were indistinguishable from intense fantasy; and occasionally one could trace the transition from fantasy to pseudo-hallucination. The mother was the figure most frequently in the center of the stage in these hallucinations. This is not surprising when it is recalled that many of those developing psychoses were primarily psychopaths of the "inadequate personality" type in whom emotional immaturity, intellectual deficiency, and a marked maternal attachment were outstanding. Other members of the family would also be "seen" and "heard." As often as not these experiences would be related without any emotional display whatever. It was very rare to find the florid hallucinations associated with schizophrenia; nor did one meet with any of the fantastic delusions or bizarre behavior of that disorder, even in those in whom the diagnosis of schizophrenia could not be questioned. In retrospect, one has the distinct impression that, with but few exceptions, the psychotic symptoms in prisoners were not deep rooted or firmly established, especially in the "prison psychoses." Of the psychoses

other than "prison psychosis," two-thirds were considered "EPTS."² Of these, a few had been committed to civilian state hospitals prior to induction, and some had consulted psychiatrists or clinics because of mental problems.

GROUP PSYCHOTHERAPY

Group psychotherapy was instituted a little more than a year after the camp was set up and gradually grew in importance and scope. Sessions lasted 50 minutes and were equally divided between the short lecture on the topic for the day, and the open discussion that followed. The therapist guided the group and did not let individual members monopolize the discussion or change the topic. Prisoners had opportunity to give free play to their emotions without fear of reprisal. The first few hours were devoted to orientation in their new status as prisoners. Then came much of the material ordinarily used in indoctrination of military personnel. Towards the end of the program were presented such topics as physiological reactions of fear, psychosomatic disorders, factors influencing morale, anxiety and how it should be handled, etc. The material was presented in a simple manner to reach the less intelligent. Attendance was compulsory. Prisoners desiring interviews other than those for routine classification were exposed to a variable degree of individual psychotherapy which, naturally, was limited by the available time. The size of the group, depending on the admission rate, seldom exceeded 50. While a few failed to benefit, many showed considerable improvement. Occasionally considerable hostility was evoked from some members of the group and one was inclined to doubt the value of those sessions; but they were worthwhile in the long run for they provided an acceptable outlet for the prisoners' feelings and served as a form of emotional catharsis if nothing else. A decrease in size of the groups, and an increase in the number of therapists, would unquestionably have produced better results. Group therapy was unusually well received by prisoners and personnel alike, once they realized what it had to offer. Although the results could not be

² "EPTS"—Existed prior to term of service.

measured, it was felt by all familiar with the rehabilitation program that group therapy helped a great deal, and that as a therapeutic instrument it had not been fully explored.

INTRAVENOUS BARBITURATE THERAPY

Sodium amytal and pentothal were used intravenously in selected functional disorders. In some the response was gratifying; in others it failed dismally. In a few the responses were at first discouraging, but the subjects subsequently improved steadily, and it was felt that the delayed improvement was at least partially due to the treatment. Among the functional disorders were: severe scoliosis, campocormia (3), analgesias, paresis of a limb, digital tremor, stuttering and amnesia. In some cases benefit from treatment was delayed by the difficulty in establishing rapport with patients who insisted on identifying the psychiatrist with the custodial prison personnel. With some prisoners rapport was impossible; they feared they might reveal information which the psychiatrist was duty bound to incorporate into the prisoner's record however detrimental it might be. Undoubtedly results would have been better if the therapist were not a key figure in the classification procedure and identified with it. Some prisoners responded satisfactorily to this treatment in the nearby hospital (where prison environment was minimized) after having been refractory at the RC. It would have been preferable for one psychiatrist to devote himself to therapy at the post hospital, while the other handled investigative and administrative work of interviewing prisoners for classification purposes. Undesirable identification of the psychotherapist with the prison situation would thus have been minimized, if not avoided.

PSYCHIATRIC ORIENTATION OF PERSONNEL

Though seldom mentioned as one of the duties of the psychiatrist at a correctional institution, the orientation of the prison personnel to the psychiatric viewpoint is one of the most important. With rare exception, enlisted men and officers who supervised, instructed and guarded the prisoners, had had little special training for their duties at the RC. There were lectures to officers and en-

listed men, and prisoners and their case histories served as illustrations. All groups were exposed to formal and informal discussions of psychiatric syndromes frequently found among prisoners. In informal and casual talks, the prisoners' problems were discussed with key men who were thus familiarized with the mental and emotional problems of the prisoners they controlled. A most effective means of educating the personnel to the psychiatric interpretation of prisoners' problems, was the presentation of uncomplicated, well defined and recognized concepts as exemplified by the case histories of the prisoners being processed for classification purposes. The report was not limited to observations usually found in a psychiatric examination. The psychiatrist delved into each prisoner's family and social background; and he correlated this and the personality shaping with the military performance, offenses, and former derelictions and disaffections. The reports thus became illustrative, individual studies in sociology and psychiatry. In due time the personnel, who frequently referred to these reports, absorbed a good deal of the didactic material to which they were exposed. Associated with this didactic "training," were, of course, the lectures, informal talks and demonstrations. Such teaching helped reduce the guess work in rehabilitation of military offenders, and contributed toward elevating the work to a more scientific level.

RESULTS

Complete statistics of the type of adjustment and subsequent military record of those rehabilitated during World War II have not yet been compiled. Latest reports indicated that about 10% were again in sufficient difficulties to warrant reincarceration for completion of sentence. About a year after the RC's activation, restorees left with sentences suspended (formerly the remainder of the sentences had been remitted). This change eliminated much unnecessary administrative work. Another general court-martial was not necessary when the prisoner again committed an offense warranting such a trial: the remainder of his former sentence was put into execution and the restoree was returned to confinement. The restorees who left with

the knowledge that the remainder of their sentence had been suspended (and not remitted) were thus provided with a greater deterrent against future difficulties. They knew reincarceration could be accomplished without delay and that there was no need for another trial and conviction to return them to confinement.

An informal study of the rates of restoration and recidivism of the 9 RCs has shown that the NSC center restored a greater percentage than the others and yet had a rate of recidivism only infinitesimally greater than some of the other RCs. Furthermore, the NSC center restored more soldiers than perhaps half all the other RCs put together! Certain types of psychopaths and mental defectives were not transferred to the USDB quite so readily as appears to have been the case in some of the other RCs, and the excellent results obtained have justified this liberal policy.

The large correspondence from RC restorees to the commanding officer and other members of the staff, was replete with expressions of gratitude and appreciation on the part of those rehabilitated and restored

to duty. A number achieved good ratings; some made the supreme sacrifice in various theatres of war; a few were decorated for valor. But most important of all was the less exciting but more significant contribution toward salvaging manpower during the critical war emergency. By this means a few thousand young men were remolded into better soldiers and citizens; and since their families as well as communities will continue to profit thereby, society at large also has benefited. It is therefore not extravagant to state that the new but proven concept of rehabilitation of military offenders should be considered one of the major social contributions of World War II.

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A STUDY OF THE MODIFICATION OF MENTAL ILLNESS BY INTERCURRENT PHYSICAL DISORDERS IN ONE HUNDRED PATIENTS¹

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The favorable influence of physical disorders occasionally noted in the course of mental illness has long been recognized clinically by many observers.

A study is presented here of 100 such patients who suffered from intercurrent physical illness on the men's service of the New York Hospital-Westchester Division, during the 12½ year period from July 1, 1933, to January 1, 1946.

The purpose of this study has been, in the first place, to determine the relative frequency of mental improvement, lack of change or possible unfavorable mental reaction associated with such physical disorders. We have further been interested in any factors determining the associated mental response with regard to the age of the patient, the duration of mental disorder previous to the illness, the personality prior to mental illness, the type of physical illness and the diagnosis of the mental disorder. An attempt has also been made to determine whether or not any correlations were present between the mental alterations related to intercurrent physical illness and those resulting from shock therapy in the patients in whom both the factors of intercurrent physical disorder and shock therapy existed.

The physical disorders included definite medical or surgical conditions of various origins which might reasonably have been expected to be of serious concern to the patient. This diverse group ranged from major surgical procedures and acute infections, to accidental and suicidal injuries, and included 20 major abdominal operations, 21 fractures, sprains and dislocations, 26 major dental procedures under general anesthesia, 15 acute infections and 18 miscellaneous physical conditions. Nine patients sustained severe injuries in suicidal attempts. These physical conditions were for the most part

acute, with a median duration of seven days. Four patients had conditions of very brief duration. Two of these suffered convulsive seizures lasting a few minutes, while a third had an attack of syncope and the fourth had an anginal attack lasting two hours. The longest illness continued over a period of 270 days in a man who suffered a pelvic fracture with recurrent pelvic abscesses.

It was found that in 67 of the 100 patients, physical disorders occurring in the course of the mental illnesses were followed by a definitely improved mental state. This improvement was interpreted in terms of definite evidence of clearer contact with the environment, diminution or disappearance of delusional trends, a more reasonable optimistic outlook, more amenable behavior, and the appearance of emotional ease and comfort. Those classified as much improved showed these changes in marked degree.

The observed improvements continued in respect to time, from one day to one week in 15 instances, and up to one month in 32 instances. Seven other temporary improvements continued for varying periods beyond one month up to one year and one month. There was a total of 28 in which the improvement in the mental state continued to the date of departure of the patient from the hospital. In 11 cases the improvement associated with the appearance of the intercurrent physical illness appeared to be the initial change in an improvement continuing to recovery. In 10 more, the improvement continued until at the time of discharge the mental conditions of the patients were considered as much improved. This gives a total of 21 patients in whom the physical disorder appeared to precipitate an improvement in the mental state which was continued to marked improvement or recovery. Two of these had received electric shock before the intercurrent physical disorder without sustained improvement. One other had had four treatments of elec-

¹ From the New York Hospital-Westchester Division, White Plains, New York.

tric shock when the physical disorder appeared, not associated with the treatments. A fourth had one electric shock treatment subsequent to his physical disorder in attempt to hasten the improvement but he reacted so poorly to the treatment that it was not again attempted.

The mental state of 27 patients remained unchanged following the intercurrent physical disorder, while the remaining 6 patients were worse.

A further statistical review of the findings indicates that age has played a minimal rôle. Ranging from 16 years of age to a maximum of 82, the majority of the patients were in the age group between 20 and 69. Forty-four were under 40 years of age but the percentage of favorable reactions to the observed physical disorders is quite comparable with those over 40.

The duration of the illness prior to the physical disorder is of some significance in that of the 83 persons who had been hospitalized less than one year, approximately 75 percent revealed improvement following the intercurrent physical disorder, while in the remaining 17 who had been in the hospital over one year, only 40 percent showed improvement. It is further noteworthy that this change was of relatively minor degree and more closely limited to the period of actual physical illness.

An attempt was made to relate mental changes associated with physical disorder to personality factors. For this purpose the patients were classified as to whether or not they had been actively aggressive or passive in dealing with their environment. The 41 patients who were considered from their record to have been actively aggressive persons showed no significant statistical difference (whether unchanged, improved, much improved or recovered after their physical illness) from the 38 patients who were considered passive, or from the 21 persons who showed a definite mixture of outward aggression and passivity.

A study of the predominant trends immediately prior to the onset of the intercurrent physical disorders revealed those of depressive character to be most frequent. Of the 51 patients with depressive trends, 27 were improved, 11 much improved, 11 showed no change and 2 were worse follow-

ing intercurrent physical disorder. Persecutory trends were next in frequency, numbering 18. Of these, 10 were improved, 1 much improved, 5 showed no change and 2 were worse. There were 10 who expressed mainly sexual preoccupations, of whom 2 showed improvement, 4 were much improved, and 4 remained unchanged. Eight revealed no outstanding trend, of whom 2 were improved, 5 showed no change and 1 was worse. There were 5 in whom fear was the primary trend and of these 3 were improved, 1 was much improved and 1 was worse.

In contrasting the two largest groups, it was found that in those with depressive trends, approximately 75 percent showed improvement, as against 61 percent for the persecutory group. It is significant, however, that *marked* improvement, as appeared in 21.6 percent of those with depressive trend was much more impressive than the less than 1 percent of marked improvements in the persecutory group.

With reference to the diagnostic categories, 34 patients had manic-depressive psychoses. Of this group, without regard to type, improvement was noted in 26 instances, with 6 unimproved and 2 worse. It is noteworthy that 14 of the 15 patients of depressed type were improved and but 1 showed no change.

Sixteen patients with involutional psychosis, melancholia, had intercurrent physical disorders. Of this number 7 were improved, 2 were much improved, 7 showed no change, and none was worse. Of the 2 patients with involutional psychosis, paranoid type, 1 showed brief improvement and 1 no change.

Twenty-nine of the group were diagnosed as having dementia præcox. Fourteen of these were improved, 2 much improved, 11 showed no change, and 2 were worse. In this group, however, the patients classified as catatonic showed improvement in 5 of 11 cases, one being much improved, while 4 showed no change and 1 was worse. There were 10 patients with paranoid dementia præcox of whom 5 were improved and 5 showed no change.

Eight patients had psychoneuroses. Of this group, 6 were improved and 2 much improved following the intercurrent physical disorders.

The patients with organic psychoses, including general paresis, Korsakow's psychosis and psychosis with arteriosclerosis showed 3 improved, 2 much improved, 1 with no change and 2 worse.

A patient suffering with psychosis with mental deficiency was improved and in 2 instances of psychosis with psychopathic personality, 1 improved and 1 was unchanged.

Eighteen of the patients who suffered from intercurrent illness received electric shock treatment. In comparing the mental reaction associated with physical illness to the mental change following shock treatment, it was found that 12 patients showed improvement after physical illness, while 15 improved with electric shock treatment. Nine of these patients who improved coincidentally with illness also showed improvement with shock treatment. Two patients improved with illness who did not with shock, while 7 patients improved with electric shock who did not do so with physical illness. Of the latter group it is interesting that 1 patient who showed no change after dental extraction under general anesthesia then received metrazol shock therapy without change but was much improved after electric shock therapy.

Three more patients had insulin shock, making a total of 21 patients who had some form of shock treatment. All 3 had dementia præcox (2 catatonic, 1 hebephrenic). One of these suddenly became mentally clear for twenty-four hours immediately following his recovery from general anesthetic for appendectomy. He then relapsed completely to his regressed, disturbed state and was later much improved after six weeks of insulin shock treatment, finally being discharged from the hospital as much improved after two months.

Another patient who was much improved mentally for two months after the repair of a perforated peptic ulcer, showed some improvement for one month after insulin shock treatment but then relapsed. The third patient showed no response to either physical illness or insulin shock treatment.

In reviewing those patients who had some form of shock treatment as a group, there were 10 who improved both with shock treatment and following their physical illness. Three patients improved with illness who did not do so with electric shock, 7 improved with shock who did not do so with

their illness, and 1 did not improve with either.

As to the condition of these patients at the time of discharge, it is noteworthy that of the 10 patients who were improved, both in relation to shock therapy and physical illness, 3 were recovered, 3 were much improved, 2 were improved and 2 unimproved—80 percent showing improvement. Of the 3 who improved with illness but not with shock, 1 was much improved and 2 were unimproved at the time of discharge. Of the 7 patients who were improved with shock but not with physical illness, 1 was recovered, 4 were much improved and 2 were unimproved (71 percent improved). The individual who was not improved with either shock treatment or illness continued unimproved.

In brief, those patients who showed a capacity for improvement in relation to both shock therapy and intercurrent physical disorder did better than those who showed improvement in relation to illness or shock alone, while the individual who showed no response to either remained unimproved.

Of those who remained unimproved at the time of discharge, 1 patient had hebephrenic dementia præcox, 2 had paranoid dementia præcox, 1 catatonic dementia præcox, 1 dementia præcox, depressive type, 1 involutional melancholia, and 1 involutional psychosis, paranoid type. Of the 13 patients who were completely recovered or much improved, 5 had involutional melancholia, 3 had manic-depressive psychoses, depressed type, 3 manic-depressive, mixed type, 1 dementia præcox, depressed type, and 1 catatonic and 1 hebephrenic type.

A comparison of the reactions of patients to intercurrent physical disorders due to self-inflicted injuries as against accidentally sustained injuries proved of some interest. Nine were treated for self-inflicted injuries (4 fractures, 4 severe lacerations, and 1 an inhalation of a dental bridge, necessitating bronchoscopy). Of these 9 patients, 8 were improved, 3 of the improvements being sustained; 1 was worse following the incident. With respect to diagnosis, 2 of these were classified as dementia præcox, 3 involutional melancholia, and 4 manic-depressive psychoses. The personalities of these patients prior to the intercurrent illnesses were re-

garded as aggressive in 2 instances, passive in 5 and mixed in 2.

The reactions, then, in this group occurred mainly in the affective group with passive personalities. This group revealed a definite tendency to improve with self-inflicted aggressive activity. Only 3 of these patients had undergone electric shock, 2 revealing temporary improvement and 1 no change.

Thirteen patients sustained accidental injury with fractures predominating in a total of 9 cases. Other accidental injuries consisted of 1 case of multiple bruises, 2 with sprained ankles and 1 with a ruptured Achilles tendon. Of these 13 patients 10 were improved following the injury, 9 of them temporarily and 1 showing sustained beneficial change. Three showed no change and none was worse. As to diagnoses in this group, 4 were classified as dementia præcox, 7 as types of manic-depressive psychoses and 2 as psychoneuroses. Six revealed aggressive personalities, 4 were passive and 3 were considered of a mixed type, prior to their illness.

Here, too, the ratio of improvement was greater in our total series, with a relation of 10 improved and 3 unimproved, as compared with 67 improved and 33 unimproved in the whole series of 100 patients.

Only 3 of this group received electric shock with 2 showing improvement and 1 no change.

Two case reports follow illustrating mental recovery apparently precipitated by intercurrent physical disorders.

1. A 26-year-old man was admitted to the hospital on August 21, 1936. He was of English ancestry with no known heritage of nervous or mental disorders. Small and stocky as a child, he had pneumonia at nine months which was followed by recurrent attacks of bronchitis, with a second and third attack of pneumonia at six and nine years of age. He is said to have made the most of his opportunities afforded by these illnesses to obtain attention and special privileges from his family. A quiet, phlegmatic child, he nevertheless was a good mixer and preferred the company of others to being alone. During adolescence his physical health improved. He then became more active in sports but was said to have taken things easily and to have waited until urged before engaging in outside activities. After graduation from high school he took a course in pharmacy with the expectation of entering his father's pharmacy business. This he did but in 1931 his mother died and a year later he was thrown on his own resources for the first time in his life by the death of his father. He then took

an apartment with his sister but made so many demands upon her that she preferred to live elsewhere.

Upon taking over the management of his father's drug store, the business did not go well due to the fact that he was impractical and unimaginative.

In June, 1936, it was observed that he was becoming more than usually phlegmatic and sleepy. He exhibited a gradually increasing depression of mood and retardation of activity, followed by undue self criticism and later overconcern as to his physical health. In July he entered a general hospital where numerous tests and examinations were reported as negative but his mental symptoms became more marked. Early in August he was sent to a neurological service where he continued to be retarded, depressed and self-depreciatory, finally resulting in his admission to this hospital.

Here his physical findings were not remarkable, but he revealed a depressed, hopeless attitude, admitted suicidal thoughts, was retarded and self-critical and indecisive.

On December 31, 1936, he had a sudden elevation of temperature to 103 with a complaint of sore throat. Given local treatment the temperature subsided and remained normal for four days, when he again complained of severe sore throat and was again found to have a fever. Hemolytic streptococci were found to be the predominating organism present in the throat. Leucocytes rose to 20,000 with 93 percent neutrophils in the differential count. In the succeeding two weeks the patient's temperature varied between 99 and 103 and he lost some weight.

Throughout his physical illness he presented few complaints, was very cooperative to his treatment and with the attention given seemed no longer depressed. On January 19 he was permitted to sit up in a chair and a notation indicates that he was pleasant and amiable. On January 23 and 24 he expressed some concern over his physical illness but by January 27 it was observed that he was jovial though still weak and tired. He gradually became more active, cheerful and more sociable. By February 23, 1937, he was given ground privileges and on March 5 began a series of short visits to his sister's home. Coincidentally with the improvement from the intercurrent physical illness he underwent a marked and sustained change in mood becoming cheerful and optimistic. On April 8 he had a tonsillectomy under local anesthesia without adverse reaction and by mid-April he left the hospital on extended visit to return to his work managing the drug store apparently recovered from the mental illness. Three months later it was reported by his sister that he was entirely recovered and was working regularly.

This case is of interest in that it reveals a passive individual who under stress of removal of his parental security, the sudden necessity for assumption of some aggressiveness in the management of a business left to him by the death of his father, gradu-

ally slipped into a retarded depression. The intercurrent physical disorder appears to have provided again the attention he had missed, with a decreasing necessity for the protection of the illness. There was a gradual misuse of aggressive interests stimulated by continual concern over the reality of his illness. The improvement associated with the intercurrent physical illness continued on to recovery and appears to have been the precipitating factor.

2. A 44-year-old married professional man was admitted to the hospital on April 17, 1939, having been referred because of depression, fears, indecision, self-depreciation, and a wish to die. He had developed a feeling of panic making him unable to go outside alone. He had given up his work because he felt ashamed to see people and because he could not concentrate.

His condition which had been of several weeks' duration was apparently precipitated by a feeling of insecurity and inadequacy at the prospect of changing his place of work and his well established mode of life.

The family history revealed that the father and a paternal aunt had died of cardio-vascular disease. The mother was a nervous woman given to worry, while a brother was subject to mild mood swings.

The patient had been a healthy child. He had done only fairly well at school although he was very studious. Always an outwardly passive individual he had few friends, was self conscious with girls, had very restricted interests and spent little time in recreation. His habits were very temperate. Following his marriage at the age of 26 he had a mild depression following which marital adjustment was good.

At the time of admission to the hospital examination showed a short, pyknic male in good physical health. Mentally the patient was depressed, retarded, hopeless and self-depreciatory. He said that he was a "faker and a coward." He was considered to have manic-depressive psychosis, depressed type, and to be very suicidal.

His psychotic depression continued without improvement for eight months after admission when he inhaled a dental bridge which lodged in his bronchus. He stated that he had done this with suicidal intent. He soon developed a temperature of 103.4 and expectorated thick, purulent material. The hooked denture was removed with great difficulty with the use of the bronchoscope.

The patient was worried about his condition and the desire to live now interested him more than his previous depressive, self-depreciatory trends. He rapidly recovered from his depression and within two months was entirely well and back in the full swing of his work.

The history of this interesting patient demonstrates the not uncommon mental im-

provement following suicidal injuries and their complications. It has been noted that of the 9 such cases studied here, 8 showed improvement; of these, 3 went directly on to full recovery from their mental condition.

SUMMARY

This study demonstrates statistically in an unselected group of 100 male patients the frequent favorable influence of intercurrent physical disorders upon the course of mental illness. Not infrequently, as seen in 11 percent of the patients, the physical illness appears to precipitate recovery. The analysis of the 100 cases has revealed that the age of the patient is of little or no significance. The duration of the mental illness prior to the appearance of the physical disorder, however, does appear to have significance; of those hospitalized less than one year, 75 percent revealed improvement, while in those hospitalized for mental illness over one year, only 40 percent showed improvement following intercurrent physical disorder. Personality factors, whether of aggressive or passive type as judged by outward behavior appeared from this study to have little or no influence on the reaction to physical disorder. In contrasting the two most frequently observed trends it was observed that improvement was more consistently associated with a depressive trend than with a persecutory trend.

Accidental or self-inflicted injuries proved to be a stimulus for improvement in a high proportion of patients. There were 9 self-inflicted and 13 accidental injuries making a total of 22 patients injured, with improvement occurring in 18 instances or in over 85 percent of these patients. The patients with self-inflicted injuries did somewhat better as a group than those with accidental injuries.

Generally speaking, these patients who showed mental improvement in relation to physical disorder also did so with shock treatment although a substantial number improved with shock treatment who did not do so with intercurrent physical illness. In those who showed a capacity for improvement in response to both shock therapy and physical disorder, the prospect of sustained improvement or recovery was better than in

those who were improved in relation to physical illness alone or shock therapy alone.

A total of 67 of the 100 cases showed improvement following intercurrent physical disorder, with the improvement proceeding directly to recovery in 11 patients. The most striking and consistent change appeared in the 34 manic-depressive cases, with improvement in 26 instances. The manic-depressive depressed group, however, did the best with 14 out of 15 showing improvement. The patients who already had organic brain disease, as might be expected, did least well in relation to intercurrent physical illness with 2 out of 8 made mentally worse.

This study of a group of 100 patients definitely suggests that one factor determining the mental improvement often associated with intercurrent physical disorder is a stimulation of the patient's interest toward the realistic goal of recovery through a threat to his physical existence. It is as if the aggression and interest which is withdrawn from external reality and turned inward into the relatively useless fabric of mental illness can often be organized and more realistically

directed outward by the patient confronted by the fear of death which is phylogenetically perhaps his most fundamental concern. For this reason it might be expected that even the most chronically regressed mental patients may show a definite temporary mental improvement associated with physical illness while more acutely ill patients may be stimulated into recovery. It might also be anticipated, as our results show, that the interest of the manic-depressive, depressive, patients whose aggression appears so relatively well organized even though turned inward, could most easily be turned back into external reality with a resulting high rate of improvement or recovery.

A comparison of the mental responses of the patients who also had shock treatment suggests that the improvement found in association with intercurrent physical illness, as well as with the manipulations of shock treatment, may have the factor in common of providing a threat to the patient which stimulates the organization of his capacities in a striving toward the biologically fundamental direction of recovery.

NAIL BITING

INCIDENCE, ALLIED PERSONALITY TRAITS AND MILITARY SIGNIFICANCE

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This paper was written because nail biting usually has been considered a nervous personality trait; many of our armed forces have been evacuated from combat areas because of nervous disorders; and it was thought that a study of nail biters who had experienced foreign and combat duty might help in determining the degree of military significance of nail biting, and hence might be an aid in selecting those whose personalities were useful for military combat purposes.

A study was made of the personalities of nail biters, the prevalence of nail biting, and the military and combat usefulness of nail biters among naval and marine male enlisted personnel who were evacuated to a hospital in this country from the Pacific battle area because of nervous conditions. These did not include psychoses or psychopathic personalities. From 223 routine admissions, 100 cases of nail biting were collected, *i.e.*, 45% of these were nail biters. More than half of them bit their nails periodically or continuously since their earliest recollections. The remainder began the habit in association with combat, or gave it up before their present illness. Of the 100 patients, 73 were marines and 27 were sailors. When this study was made, two-thirds of the patients at this hospital were marines.

The family history of these patients was studied, and it was found that 25% of them had parents or older siblings who were nail biters.

Of the entire group of nail biters, 73% had an unduly irritable disposition. They described their tempers as "quick, violent, high, hot." They said they "get mad real quick," "get mad all at once," "fly off the handle easy," and "flare up and blow up." Among those with unusually irritable natures, only 30% had any civil or naval legal offenses; and in the entire group a frequent complaint was that of fear lest they not have "clean record." These figures may be

influenced by the absence of psychopaths and psychotics from this study.

The most frequent circumstances under which nail biting occurred were reviewed. In one-half the patients, it happened when they were in tense, emotional situations, as "when I am mad and can't do anything about it"; when observing movies of murder and war; and in combat, after it, or while thinking of it. A second frequent occasion for nail biting was during periods of inactivity enforced by others or themselves. A desired result was to aid in concentrating attention, as "to clear my mind when about to fight," and "to make decisions." A casual

TABLE I

	Average months service	Average months tropical duty	Average days combat	% returning to duty
Part A—entire group of nail biters.....	27	15	72	45
Part B—bad tempers with many fist fights.	32	20	81	55
Part C—bad tempers with few or no fist fights	30	5	58	14
Part D—tremble and weep when angry..	22	12	40	35

explanation of nail biting was described as "just catch myself doing it not thinking." Here there was usually the interpolation, "ashamed of doing it," or "I know better." These addenda were given voluntarily by those whose nail biting started in childhood. Other explanations were, "don't know," and "just a habit, like smoking."

The military usefulness of nail biters was determined by estimating the time they were in the service, the amount of tropical and combat duty they experienced, and their will and ability to return to duty after adequate treatment.

According to Table I, part A, it is obvious that the entire group of nail biters were not without military usefulness.

A study of individual case histories revealed that some nail biters had undergone prolonged, tropical, combat duty, and after treatment were able to return to duty; others were found less useful for military combat purposes.

An illustration of the latter group is seen in:

CASE 1.—This was a 23-year-old marine. His nail biting was of many years duration. He characterized it as, "I just chew on my little pinkies" (the tips of his little fingers). He said he bit his nails, "just to have something to do; it's a bad habit; it broadcasts you are nervous." Other early neurotic traits included fear of the dark, fear of crowds, sleep talking, and sleep walking all of which persisted until 4 years after puberty. His usual reaction to his very quick temper was to weep and tremble. He never had a fist fight. His strict, irritable father beat him unmercifully when he erred. This was a frequent occurrence.

During his 14 days of military combat duty, "my hands paralyzed. I trembled and cried. I didn't even shoot at a Jap. I couldn't do it. I was just in a fox-hole. They thought I was yellow."

A nail biter useful for combat duty is seen in:

CASE 2.—This 21-year-old marine had bitten his nails since childhood. His right index finger nail was bitten most frequently. "I have to bite him all the time." This occurred most frequently while he observed murder mystery movies, and when "sitting down doing nothing." He had few early neurotic traits. He characterized his temper as "quick and soon over it." He had more than the usual number of fist fights; and when angry, "I often hit 'em." He had no complaints about his parents whom he considered happily married.

In his 90 days of military combat experiences, "I didn't mind killing 'em. One Jap made me mad keeping on sniping. So I cut his throat and stuck a branch through him. He looked funny. I wondered why I did it." He was evacuated to this country when he received a severe blast concussion.

An effort was made to determine the characteristics of nail biters who were useful for military combat duty. The numerical frequency of early neurotic traits was reviewed and it was found that those with few of these traits did better than those with many of them.

Since a violent temper was a trait common to 73% of the nail biters, it was considered pertinent to investigate the reactions of these patients to their rage. It was found that 27 of them had numerous fist fights since childhood; and 46 gave a history of very few or no fist fights. Table I, parts

B and C, shows that those with numerous fist fights were more useful for military and combat purposes than those who had few or no fist fights.

A study of the child-parent relationship among those who were not apt at fist fighting revealed that the patients complained of their parents in the following order of frequency: parents divorced or dead; drunken father who beat the family; parents who quarrelled or fought; quick tempered parents who beat their children unmercifully; parents who were "too good" and seldom corrected the child; and parents who worked, so that "there wasn't much home life." These complaints about parents were absent or of much less frequency among those who reacted to their anger by fist fighting.

The group who had no fist fights explained their peculiarity in the following ways: "I'm afraid for myself for what I might do," "afraid I might hurt some one," "if I get mad I would really cut 'em up," "once when mad I tried to kill my best friend," and "I get all excited and fouled up and shake. That's what makes me a poor fighter."

Among those with violent tempers, the usual reaction of weeping and trembling when angry was present in 28 patients, most of whom were in the group who had few or no fist fights. As may be seen in table I, part D, the military combat usefulness of those who trembled and wept, compared unfavorably with that of the entire group of nail biters.

The combat experiences of the 100 nail biters were studied. It was found that 19 had no combat; 50 had a nonchalant reaction to combat killing; 6 boasted of enjoying it; and 25 were emotionally disturbed by it.

The reasons for emotional disturbance by combat killing were described as: "The Japs are like you and I. They have families," "I ain't stepping out of my way to be a Silver-Star guy," "the sight of blood makes me puke," "I don't like to see anything killed. In the Bible it says you shouldn't be a killer."

The reactions of those who enjoyed combat killing or had a nonchalant reaction toward it were reviewed: "It relieved my tension to kill Japs," "I got a kick out of watching 'em fall," "It was either me or him," "I got a grudge against them, account it was them that made me go over there," "I

enjoyed killing 'em. It was just like killing a rat."

Among the 46 patients with strong tempers who had few or no fist fights, 64% were unduly emotionally disturbed by combat experiences, 23% reacted nonchalantly, and 13% experienced no combat. Also among the 28 patients with trembling and weeping reactions to their violent tempers 57% were unduly upset emotionally by combat killing; 21% reacted nonchalantly to it; and 22% had no combat.

A comparative study was made on naval male enlisted personnel who had experienced combat in the Pacific or Atlantic battle areas, who had no sick list admissions because of nervousness and who were separated from naval service by the point system. The study was made soon after the end of World War II, when separatees had experienced prolonged foreign combat duty. From 1571 such routine separatees, 100 cases of nail biting were collected, *i.e.*, 6% of them were nail biters. Of these, more than half bit their nails as long as they could recall. The remainder started it in association with combat, or gave up the practice before joining the Navy. Of the 100 cases, 75% had a temper of average or less than average degree; 90% had experienced an average or more than average number of fist fights; and 93% had never trembled and wept when angry.

SUMMARY

Patients evacuated to a naval hospital in this country from the Pacific battle area be-

cause of nervous conditions, excluding psychoses and psychopathic personalities, were examined in regard to nail biting. From routine admissions, 100 nail biters were collected. The frequency of the condition was determined. By studying the personalities, service and combat reactions of these patients, an effort was made to throw some light on the personalities of nail biters and the military usefulness of those who bite their nails. A comparative study was made on 100 nail biters who had experienced combat, who had no sick list admissions because of nervousness, and who were separated from naval service by the point system.

CONCLUSIONS

1. In military combat, nail biters generally are less useful than non-nail biters.
2. However some nail biters undergo combat without hospitalization for nervousness; and many nail biters experience prolonged combat prior to hospitalization for nervous conditions.
3. Nail biters least useful for military combat purposes are characterized by:
 - (1) Unhappy child-parent relationship.
 - (2) Multiple early neurotic traits.
 - (3) Very irritable, explosive temper.
 - (4) Usual reaction of weeping and trembling when angry.
 - (5) Infrequency or absence of fist fights in early life.
 - (6) Emotionally disturbed response to combat killing.

A PSYCHOSOMATIC APPROACH TO THE PROBLEM OF STUTTERING IN PSYCHOTICS

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In the evolution of man, speech is the most highly integrated function. It has served as one of the most directed means of expression toward establishing interpersonal relationships.

Disturbances along the pathway and levels of speech may be of three varieties, namely: (1) disturbances of phonation and articulation; (2) disturbances in symbolic expression, and (3) disturbances in rhythm. A disturbance of the latter type is commonly known as stuttering or dysphemia.

In the realm of speech disorders, stuttering plays a most prevalent and important rôle. Attempts to study and classify this syndrome have been made by the psychiatrist, the neurologist, the laryngologist and the sociologist. In spite of the wide number of theories that have been offered with respect to the nature, etiology and treatment of this condition it still remains a topic of considerable discussion and controversy.

METHOD OF STUDY

The present investigation was conducted among psychotic patients at the Central Islip State Hospital. Only those patients who exhibited definite symptoms of stuttering were selected for study; patients who were mute, disturbed and resistive, and those whose stuttering syndrome was masked by some allied speech disorder were excluded. In the study of the case material special consideration was given to possible relationship of neuropsychiatric and psychosomatic disorders with the problem of stuttering.

OBSERVATIONS

The observations derived from this study were divided into two categories. The first or neuropsychiatric study is indicated in Table I, and consists of the age, sex, psychiatric diagnosis, personality make-up, family history (including inherited and constitutional factors), emotional behavior at the time of examination, and a superficial

neurological and physical examination. The second part consists mainly of personal interviews with the patient in which data relative to the underlying psychopathology of the stuttering symptom were formulated.

PART I. NEUROPSYCHIATRIC STUDY

The material selected for study was relatively small in comparison to the total number of resident patients, namely 20 in about 7,000. It included 16 males and 4 females, 17 to 55 years old, the average age being 34 years. It was interesting to discover that only one in every 350 psychotic patients, or .28 percent, stuttered. This percentage is small in contrast to the incidence of stuttering among the general population in this country, which is about one percent, amounting to about a million and a quarter. However, allowances must be made for some degree of error in a study of this kind.

The patients were diagnosed according to the classification adopted by The American Psychiatric Association. There were 11 cases of dementia præcox (6 paranoid, 4 hebephrenic, 1 catatonic), 3 cases of psychosis due to convulsive disorders, 2 manic-depressive-manic psychosis, 1 case of psychosis due to mental deficiency, 1 with alcoholic psychosis-pathological intoxication, 1 psychoneurosis-psychasthenia, and 1 case of psychosis with epidemic encephalitis.

With respect to their personality traits patients were classified as introverts or extroverts. This simple classification does not fully describe all personality characteristics, but serves as a measure of the predominant attitudes of the individual in meeting life situations. Table II shows that 15 cases were of the introvert type and 5 cases extrovert.

The family history presented some outstanding neuropsychiatric or psychosomatic disorder in every case except in two where such information was not available. In the majority of the cases there was a definite history or indication of some immediate

TABLE I
NEUROPSYCHIATRIC STUDY

Age	Sex	Psychiatric diagnosis	Family history including inherited and constitutional factors	Emotional behavior	Physical findings
33	M	Dementia præcox, paranoid type.	Parents are first cousins, temperamental, demanding, rigid.	Impulsive, quarrelsome, tense.	Asthenic habitus, congenital organic brain pathology, generalized asymmetry between sides of body.
41	M	Dementia præcox, paranoid type.	Mother neurotic, killed under a truck when patient was 12 years of age. Father alcoholic.	Inferior, fearful, tense, dependent, submissive.	Asthenic habitus, history of diabetes mellitus, anxiety features.
55	M	Dementia præcox, paranoid type.	Father psychotic—committed suicide.	Seclusive, surly, antagonistic.	Clinical evidence of pulmonary tuberculosis.
39	F	Dementia præcox, paranoid type.	One sister psychotic. Another sister chronic alcoholic. Mother neurotic.	Suspicious, moody, irritable, egocentric.	Dysplastic habitus, enlargement left side of heart, marked hirsutism and masculine features.
39	F	Dementia præcox, paranoid type.	Questionable history of insanity in family.	Fearful, inadequate, delusional.	Asthenic habitus, extrasystoles positive Babinski.
46	M	Dementia præcox, paranoid type.	Brother psychotic. Mother high-strung, temperamental.	Tense, anxious, fearful, delusional.	Asthenic habitus, chronic anxiety symptoms.
23	M	Dementia præcox, hebephrenic type.	Family history not available.	Disturbing, tense, assaulting tendencies.	Asthenic habitus, chronic anxiety symptoms.
18	M	Dementia præcox, hebephrenic type.	Mother neurotic. Maternal aunt psychotic. Both parents worrisome.	Aggressive tendencies, disturbed, quarrelsome, tense.	Asthenic habitus, anxiety symptoms.
36	M	Dementia præcox, hebephrenic type.	Mother psychoneurotic, overproductive, temperamental.	Inferior, seclusive, tense, dependent.	Asthenic habitus, negative physical findings.
32	M	Dementia præcox, hebephrenic type.	Mother neurotic. Father alcoholic, both parents nervous, worrisome, unstable.	Silly, manneristic, childish, inadequate, superficial.	Asthenic habitus, chronic eczema, anxiety symptoms.
24	M	Dementia præcox, catatonic type.	Family history not obtainable.	Withdrawn, shy, seclusive, manneristic.	Asthenic habitus, anxiety symptoms.
36	M	Psychosis due to convulsive disorders, excitement.	Mother neurotic, diabetic. Father died when patient was 6—cause not known.	Suspicious, irritable, defensive, impulsive.	Asthenic habitus, history of early spinal meningitis, irregularities of pupils, ataxic gait.
20	M	Psychosis due to convulsive disorders, epileptic deterioration.	Both parents were drug addicts. Mother had epilepsy and attempted suicide several times.	Psychopathic tendencies, irritable, disturbing, aggressive.	Systemic syphilis, bilateral corneal opacities, positive Babinski.
35	F	Psychosis due to convulsive disorders, clouded states.	Mother psychoneurotic. Paternal cousin feeble-minded.	Confused, seclusive, deteriorated.	Dysplastic habitus, history of spinal meningitis, hirsutism and masculine features.
50	M	Manic-depressive, manic psychosis.	Both parents unstable, not understanding, demanding, rigid.	Excited, tense, increased psychomotor activity, flight of ideas.	Asthenic habitus, negative physical findings.
50	F	Manic-depressive, manic type.	Mother psychotic. Maternal aunt committed suicide.	Tense, excited aggressive, anxious.	Dysplastic habitus, anxiety features, cardiac pathology, visomotor disturbances.
29	M	Psychosis with mental deficiency.	Mother neurotic. Father died of diabetes mellitus.	Impulsive, aggressive, fearful, tense.	Asthenic habitus, exophthalmos, sinus arrhythmia, gastro intestinal disturbances.
31	M	Psychoneurosis, psychasthenia.	Parents unstable, sensitive, insecure. Mother overprotective.	Dependent, submissive, compliant, non-assertive.	Asthenic habitus, physically negative.
28	M	Psychosis due to alcohol, pathological intoxication.	Mother highly neurotic. Father domineering, stern and rigid.	Fearful, tense, dependent, anxious.	Asthenic habitus, moderate sclerosis of retinal vessels, liver pathology, anxiety features.
17	M	Psychosis with epidemic encephalitis	Mother is mentally defective. Two maternal aunts and maternal cousins psychotic.	Sexual degenerate, too impulsive, aggressive, tense, disturbed.	Froehlich constitution, mammary glands over-developed, female distribution of pubic hair slight, facial masking with bilateral ptosis of eyelids.

member of the family having psychotic manifestations, more often on the maternal side. In every case, one or both parents were described as nervous, temperamental, worrisome, demanding, rigid, not understanding; and frequently an attitude of overprotection or lack of sympathy appeared to be present. The family environment and parent-relationship in most instances were characterized by a lack of warmth and affection, and frequent emotional stirring.

There was found to be definite emotional instability in each individual case, and in the majority the underlying tension and anxiety features were marked.

TABLE II

Diagnosis	Introverts	Extroverts	Total
Dementia præcox:			
Paranoid	5	1	6
Hebephrenic	3	1	4
Catatonic	1	0	1
Psychosis due to convulsive disorders	2	1	3
Manic-depressive psychoses	0	2	2
Psychoneurosis:			
Psychasthenia	1	0	1
Alcoholic psychoses:			
Pathological intoxication	1	0	1
Psychosis due to mental deficiency	1	0	1
Psychosis with epidemic encephalitis	1	0	1
	15	5	20

Patients of the schizoid variety were seclusive, shy, fearful, submissive, non-assertive, withdrawn, egocentric and highly dependent. The more deteriorated types were surly, untidy, manneristic, confused, silly, inadequate, childish, superficial and presented some degree of sensorial cloudiness. The few cyclothymic types present were disturbed, assaulting, talkative, antagonistic, flighty, impulsive and presented frequent mood changes.

The physical examination revealed no outstanding pathological features. The body builds were predominantly of an asthenic variety in the male sex, and of a dysplastic nature in the female. One male presented a fairly typical Fröhlich constitution with marked obesity, underdeveloped genital

organs, overdeveloped mammary glands, and female distribution of pubic hair. In two of the female group hirsutism and masculine features were marked. The prevalent physical diseases observed were cardiac irregularities, gastro-intestinal disturbances, spinal meningitis, epilepsy, systemic syphilis, diabetes mellitus, and one case of active pulmonary tuberculosis.

The neurological examination revealed no evidence of peripheral neuro-muscular involvement nor were there any pathological disturbances of the speech organs. Deep reflexes were slightly exaggerated, but equal on both sides and of no pathological significance. A true Babinski sign was found in two cases, one of which was an individual with systemic syphilis. In nearly every case there were symptoms of acute or chronic anxiety, characterized by excessive sweating of the hands and feet, fine tremors of the outstretched hands, occasional tics and twitches of the face and upper extremities, and the so called parakinesias or purposeless, jerky and irregular movements of the body, usually associated with the tension factors of stuttering. During the marked phases of stuttering, signs of vasomotor instability associated with blushing, cardiac palpitation, dilated pupils, and variations in blood pressure were frequent.

The lack of consistency and uniformity of physical findings may lead to the conclusion that physical factors play no part in the etiology of stuttering.

PART II. PSYCHOPATHOLOGY OF THE STUTTERING SYMPTOM

1. Age of Onset and Sex-Distribution.—

According to Glauber, about 90 percent begin under the age of 10 and the majority of these start in the first five years. He states, "These are the years when the first major social adjustments begin. The early incidence of this syndrome and its continuation without a break through childhood, adolescence and adulthood, despite many spontaneous recoveries and improvements, is of the utmost significance. It is in marked contrast to almost all the other clinical forms of psychoneuroses which have a later onset. In stuttering, due to the early onset and continuation of the syndrome, there results an arrest of

emotional development and a disturbance in interpersonal relationships that is most pervasive and that marks the condition as a unique and profound character neurosis." Orton divides the onset of stuttering into two periods, one beginning at the period of speech learning (2-3), and the other at the time of writing (6-8).

The question of sex distribution in stutterers remains as yet in a controversial state. The males are from four to eight times as frequently affected as females. Greene offers the most conclusive explanation; he states, "that early environmental stress is never as hard on girls as on boys. The element of social competition enters into the life of even the youngest boys much more decisively than into that of girls. For the little girls play with each other in groups, the same as they did when they played with their mothers or sisters at home, while the boy is injected immediately into an incomparably more strenuous atmosphere of group games in which the prowess of much older boys sets the standards. In other words, the social impact is stronger in the male sex and stuttering therefore must be common. Also an additional hardship for the male is the fact that mothers usually center their affection on him, injudiciously shielding him and thereby weakening him, with the result that he is unable to cope with the regulation environmental onslaughts."

With regard to the development of the speech mechanism, Abt and his co-workers have reported that at 18 months only 14 percent of the responses of boys are comprehensible whereas in girls 38 percent are comprehensible. According to Tilney and Casamajor, there is an earlier myelinization of nerve fibres in girls than in boys, coincident with development of speech function. Allen in a study of 300,000 cases concluded that females presented in many ways a greater physiological and neurological stability.

In our study we found, through direct questioning of the patient or by information received from some immediate member of the family, that 12, or 60 percent, were able to recall the age of onset. The remaining 8, or 40 percent, were unable to recall the age of onset of stuttering. Ages recalled ranged from 5 to 8 years in all but two cases; in these the beginning of stuttering was noticed

after the age of 10. The patients' recollection in these last two cases may not have been entirely trustworthy.

2. *Precipitating Factors.*—The onset of stuttering in childhood may be precipitated by any experience which in a stuttering-type individual generates anxiety and fear. Such traumatic experiences are fright, accident, illness, operation, forcible conversion from left to right-handedness, or a tense and worrisome home environment. The element of fright as a situational traumatic experience plays the most prevalent rôle. The most common experiences of this type are: being frightened by the dark or lightning; receiving a severe punishing at the hands of a domineering and stern parent; being frightened by a dog or some other animal; being chased or mobbed by a gang of "tough boys"; being yelled at by an angered person; being thrown into water for the first time; and being caught in the act of masturbation by a parent.

Of the 20 patients examined 7, or 35 percent, could attribute the symptom of stuttering to some specific happening. Eight, or 40 percent, felt that the primary cause of their stuttering was possibly a tense and worrisome environment, and 5, or 25 percent, were unable to cite a specific happening.

The following examples are illustrative of those cases with known precipitating factors:

1. L. H., an only child, was closely attached to his mother who overprotected him and held him very close to her "apron strings." During his early childhood, she directed his mode of living and shook his feelings of security. She constantly spoke to him of the dangers and cruelties of the outside world, and forbade him to associate with the rest of the boys in the neighborhood. He presented a history of nail-biting, enuresis at the age of 9, and frequent nightmares of a terrifying nature. At the age of 6, after much persuasion, he went along with a group of his playmates to a nearby vacant building which his mother had constantly warned him not to visit, because "it was supposed to be haunted." As he entered the building, one of the older boys decided to play a prank on him by pushing him through a doorway and running away with the rest of the group. This incident of being isolated in a forbidden spot was of a frightening nature, and subsequently he stuttered.

2. N. H., a 35-year-old male, was the product of a domineering, stern and rigid mother and an alcoholic father who had little time to spend with his children. The family environment was one of constant friction and quarrels. At an early age he was subject to nail-biting, temper tantrums and

nightmares of "being beaten up." His eldest brother was his constant and only companion and the one in whom he confided and whom he respected. At the age of 8 while chasing his brother through the streets while playing he saw his brother being struck by a truck and instantly killed. Involuntarily following this tremendous psychic shock he began to stutter.

3. R. B., a 50-year-old female, was reared most of her life by a domineering and intolerant father who punished her frequently. When the patient was 5, her mother suddenly became psychotic and was confined to a mental institution. During her early childhood the patient was subject to horrifying nightmares of being chased by weird animals which would awaken her and cause her to have nocturnal crying spells. At the age of 7 she was frightened by a large dog, and subsequently began to stutter.

4. S. R., a 20-year-old male, was the only child of parents who were drug addicts. The father was a severe stutterer, and frequently when he became angered, would beat his wife in the presence of his son. The mother later took to alcohol and when the boy was 6 years of age, she committed suicide. When the boy first entered school, he was shy, seclusive and insecure. Whenever he was about to be called upon to speak in class, he would become afraid and break out into a complete sweat. His lips would tremble and he couldn't speak for some time. He had been a chronic nail-biter up to the time of examination, and there is a history of being a sleep walker in earlier years. At the age of 7 he was forced, upon the insistence of his father to undergo a tonsillectomy. The severe fright and shock sustained during this incident was followed by stuttering.

5. D. S., an 18-year-old male, went swimming at the age of 8 against his mother's wishes. While diving, he slipped and struck his skull against a plank, receiving a slight injury to his forehead. He was not unconscious, but temporarily shocked and frightened. This frightening experience, plus the anticipation of being punished by his mother, was alleged to have caused the stuttering.

6. A. D., a 33-year-old male, was left-handed since birth. Both parents were described as being vigorous, intolerant and demanding. There is a history of a brother and a maternal cousin who stuttered. There was a constant fear of not meeting his parents' demands and of receiving some form of punishment in consequence. As a child he wet the bed and had frequent nightmares of "falling off tall buildings or of floating off into space, without being able to come back to earth." At the age of 5, he was forcibly threatened to be converted from left to right-handedness, and subsequently stuttered.

7. T. R., an 18-year-old male, began to stutter at the age of 9, following an attack of encephalitis lethargica. His family history denoted a highly

neurotic, temperamental, highstrung and worrisome mother. The father died when the boy was 6 years old, cause unknown. A maternal aunt stuttered and later became psychotic. During the entire course of the illness, the mother remained constantly at his bedside, sobbed, cried and prayed continually for his recovery. He has been a chronic nail-biter and wet the bed until the age of 12.

The following case review is presented in some detail, to illustrate the salient features of a tense and worrisome home environment acting as a precipitating factor in stuttering and finally leading to a psychotic level.

8. R. S., a 41-year-old male, white, was admitted to Central Islip State Hospital on a regular commitment on August 12, 1943. He gave a history of being extremely aggressive and hostile toward his mother. He struck her at frequent intervals, threw furniture about the house in her presence, and assumed a threatening attitude. He was found to be emotionally tense, anxious, antagonistic and quarrelsome. He presented definite delusional trends which were mainly about his mother. There were no hallucinations admitted, nor was there any clouding of the sensorium. The physical examination revealed a tall individual of asthenic habitus with marked symptoms of acute anxiety. The stuttering features throughout the examination were marked. His diagnosis was dementia præcox, paranoid type.

The family history revealed no significant factors from a hereditary standpoint. He was the only child of a "middle class" Jewish American family. The mother was described as domineering, stubborn, rigid and stern. The father was gentle, understanding, submissive and compliant, but had little time to spend with the boy. The father was also a severe stutterer and had two brothers with a similar speech impairment. The family environment was one of continued friction and quarrels, which centered mostly about economic stress. During R. S.'s entire childhood he was closely attached to his father on whom he greatly depended. When left alone with his mother, there was the constant fear of not meeting with her demands and of receiving punishment. During his early childhood he was seclusive and shy and was never at ease with the other boys in the neighborhood who "bullied him." In spite of her domineering attitude, the mother attempted to win over her son on every occasion by hugging and kissing him. Up to the age of 10 he slept in the same room with the mother in a bed close to her. During this period he began to wet the bed and had frequent nightmares characterized by a feeling of helplessness in the face of impending peril. He has bitten his nails all his life. He was rather retarded in learning to walk and talk and was described by the mother as being a rather "slow moving and nervous individual." As a child he progressed very slowly in school because of his "day dreaming" and inability to concentrate. He sat mostly in the rear of his classes to avoid being called upon to recite, when his arms and legs

would tremble and his heart would pound rapidly. When R. S. was 12 his father deserted the family after a heated argument. As the father began to leave the house, the boy clung desperately to him, crying hysterically and pleading with him to remain at home. During the struggle the mother tore the boy away from his father, pushing her son to the floor. This traumatic experience preceded the onset of stuttering.

An emotional stirring was thus set up during childhood, which was difficult for the boy to understand or accept. His hostility and dislike for his mother on one side, and the need for affection and warmth from his father on the other, brought about emotional conflict and anxiety. The child is thus rendered insecure and helpless and is compelled to search for new ways to cope with life in a safer manner. In order to combat this ever-growing state of anxiety, neurotic trends are formed with their secondary defense mechanisms. Because of the constant state of feeling ridiculed, belittled and threatened by corporal punishment or deprivation, he assumes a passive attitude. His community is experienced as one of intolerance and authority. Interpersonal relationships become distorted in later years, and the individual usually becomes submissive, yet self-assertive and aggressive. Finally, this unconscious hostility and rage which is being constantly repressed is brought to a conscious level; the power of concentration and the accepted bases of reasoning and judgment are impaired, finally leading to a psychotic state which was manifested by threatening to assault the object of hatred.

Table III shows the age of onset and the various alleged causes of stuttering.

3. *Family History*.—In a recent study of 100 cases taken from the National Hospital for Speech Disorders in New York City, Meyer found that where an inquiry into the family history was undertaken, 61 patients asserted that there were other stutterers in the family; whereas in a control group of 246 non-stuttering students from the New York University Medical College was studied, only 16, or 6.5 percent, stated that they had relatives with a history of stuttering. These findings indicated therefore that stuttering is nearly ten times as frequent in the families of stutterers as in the families of non-stutterers. A further examination of the pedigrees in his study revealed no consistent tendency for either an inheritance by females from male parents or the inheritance by half the offspring of female stutterers. In conclusion, Meyer states: "There is no evidence, therefore, that stuttering is inherited either as a simple recessive or as a sex-linked genetic factor. Leaving aside then a genetic

explanation, it is justifiable to consider other possible factors responsible for the tendency for stuttering to occur in families."

An examination of the family histories in this study showed that in 9, or 45 percent, of the cases, there was a history of other stutterers in the family. Of these, in only one

TABLE III

AGE OF ONSET AND PRECIPITATING CAUSES OF STUTTERING

Age of onset	Precipitating causes
6	Frightened by the fear of being left alone in a "haunted house."
?	Unknown cause.
12	Tense and worrisome home environment.
8	Frightened at the scene of his brother's accidental death.
?	Tense and worrisome home environment.
6	Cause unknown.
7	Frightened by a large dog.
11	Tense and worrisome home environment.
?	Cause unknown.
7	Frightened by the fear of undergoing a tonsillectomy.
6	Tense and worrisome home environment.
?	Cause unknown.
5	Forcible conversion from left to right-handedness.
?	Tense and worrisome home environment.
7	Cause unknown.
9	Stuttering following an attack of encephalitis lethargica.
?	Tense and worrisome home environment.
?	Cause unknown.
8	Frightened by an accident while swimming plus anticipation of being punished by a parent.
?	Tense and worrisome home environment.

? = Unable to recall age of onset.

instance was stuttering noted in the families of both parents.

4. *Psychiatric Implications*.—Stuttering must be considered as a symptom of an underlying neurotic condition. It is a complex syndrome with multiple etiology, and only through a psychosomatic approach can we expect to understand its nature.

The stutterer hesitates in making any decisions and is in a constant state of fear. He

has difficulty in speaking only in certain situations, and usually this situation represents a threat to his personality. It is commonly known that the stutterer can sing freely, and that when alone or in certain definite situations he is altogether stutter-free. Speech to the stutterer becomes an acutely conscious process and is usually associated with feelings of fear and embarrassment. The stutterer may develop numerous devices or tricks to avoid the bugaboo word or momentarily release anxiety, such as pinching himself, talking in a mechanical tone, or by rhythmically swinging his arm. This in turn serves only as a momentary release, building up all the more conflict and anxiety.

The early childhood history usually reveals traumatic experiences, nightmares, fears, hysterical manifestations, disturbances of sleep, nail-biting, enuresis and emotional lability. Similar findings were discovered in about three-quarters of the case histories reviewed. The outstanding characteristics discovered in all patients were the element of fear and the general tendencies to asocial behavior.

Attempts to clarify the problem of stuttering through correlated studies by means of blood determinations, electroencephalography and the Rorschach method have led to no definite conclusions, beyond confirming the state of persistent chronic anxiety.

SUMMARY AND CONCLUSION

The study of 20 stuttering psychotic patients at the Central Islip State Hospital showed:

(a) One in every 350 psychotic patients or .28 percent, stuttered. (b) The psychiatric diagnosis was mainly schizophrenia. (c) Fifteen cases were of the introverted type and 5 cases of the extrovert variety. (d) The family history presented some degree of neuropsychiatric or psychosomatic disorder in every case except two where such information was not available. (e) The personality make-up of the majority of the patients appeared to be of a schizoid variety. (f) The physical examination presented no definite findings for establishing the etiological basis of stuttering. The neurological examination

revealed no evidence of peripheral neuromuscular involvement or any pathology of the speech organs. (g) Nearly every case presented symptoms of acute or chronic anxiety. (h) The ages of onset of stuttering were recalled in 12 cases. These ranged from 5 to 8 years in 10 cases, beyond 10 years in 2 cases. (i) The ratio of males to females was 4 to 1. (j) Of the 20 patients examined 7 could attribute the symptom of stuttering to some specific happening. (k) In 9 cases there was a history of other stutterers in the family—in one instance stuttering was noted in the families of both parents. (l) Stuttering must be considered as a symptom of an underlying neurotic personality reaction. It is a complex syndrome and not due to any single etiological factor. Only through a psychosomatic approach can its nature be understood. (m) The difference between stuttering personalities in neurotics and psychotics is one of degree only.

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COMPARATIVE INCIDENCE OF NEUROPSYCHIATRIC CASUALTIES IN WORLD WAR I AND WORLD WAR II¹

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DAVID W. HILGER, MAJOR, M. C.

Statistical comparisons of reported incidence of neuropsychiatric conditions in the United States Army in World War I and World War II must be made with considerable caution. For several reasons the reported rates are only roughly related to the actual incidence of neuropsychiatric disorders in military personnel. Changes in administrative policies have resulted in gross fluctuations in the rates for this war. The present figures, although not entirely reliable, are sufficiently accurate to permit reasonable conclusions as to the magnitude of the problem; while, in World War I, reporting of neuropsychiatric conditions is known to have been much less complete and, in some instances, quite unreliable. When possible, adjustments have been made to correct these deficiencies in the charts shown here. An important factor is that in the present war the Army has been much more alert to psychiatric disorders than it was in the last, and has recognized many truly psychiatric conditions which in World War I were attributed to other causes. It remains true today, however, that many clear-cut cases are not recognized as psychiatric, or at least not diagnosed and classified as such, and are labeled "gastro-intestinal disorders," "low back pain," and the like. With all due allowances for these shortcomings in the reported rates, the evidence clearly indicates that the actual incidence of neuropsychiatric conditions is significantly higher in World War II than it was in World War I.

Fig. 1 provides a statistical comparison of neuropsychiatric admissions to both hospital and quarters in the American Expeditionary Forces in World War I² with that in the

European Theater in World War II.³ Since admissions to quarters were not recorded in World War I, the reported rates have been adjusted on the assumption that for every three admissions to hospital for psychoneurosis, behavior disorders, psychopathic states and mental deficiency, there was an additional admission to quarters. With the advent of intensive combat the World War I rates increased by about 150 percent whereas those of the present war increased by about

NEUROPSYCHIATRIC AND WOUNDED ADMISSIONS TO HOSPITAL AND QUARTERS
WORLD WAR I AND WORLD WAR II

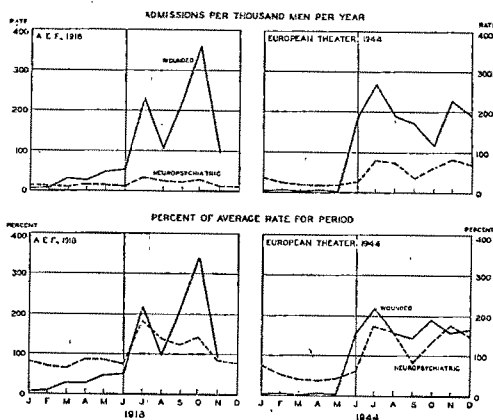


FIG. 1.

300 percent. The theater rates for the recently concluded action have been about two to three times those for the active combat period in World War I. The theater casualty rate for 1918 more nearly approximates those of 1944-1945 if account is taken of the higher proportion of noncombat troops in the present war. An entirely satisfactory comparison of casualty rates for combat divisions cannot be made but the evidence suggests that rates for *divisions in the line* from

¹ From the Surgeon General's Office, U. S. Army, Washington, D. C.

² Medical Dept., U. S. Army in the World War, Vol. XV, Statistics, Part 2, Medical and Casualty Statistics, Washington, U. S. Government Printing Office, 1925, 1,368 p.

³ Unpublished tabulations, 1945, Medical Statistics Division, Office of The Surgeon General, U. S. Army. These figures are provisional, and may differ slightly from final data to be published subsequently.

26 September to 11 November 1918⁴ were five to six wounded per 1,000 men per day as against four to five for the period 6 June to 30 November 1944. The average neuropsychiatric admission rates for divisions in the line and in reserve were about 140 per thousand men per year for the A.E.F. and 260 for combat divisions on the European continent from June through November.

These differences cannot be attributed to inferior screening in this war, since the neuropsychiatric induction examination and criteria for acceptance are unquestionably far more rigid now than in World War I. One possible explanation is that the mental health of the nation has deteriorated in the twenty-five years since the last war; however, the evidence for this is far from conclusive and there is considerable evidence to the contrary. Certainly it is well known that the physical health of the young men of today is considerably better than that of their fathers. Another possibility is that classification and assignment of personnel in this war is less satisfactory than it was in the last, and that a greater number of men have been placed in jobs for which they are not fitted by training or inclination and that as a consequence they develop symptoms of maladjustment. However, evidence seems to indicate that the classification system is at least as good in this war as it was in the last, if not considerably better. Undoubtedly the most important single factor in the health of an enlisted man is the quality of the leadership to which he must submit and yet there is no reason to believe that the leadership in this war is inferior to that in the last. Certainly the training of junior officers for the present conflict has been as thorough as in the last war, and their knowledge of human motivation and behavior cannot be less than that of their predecessors. Certainly also their ability to supply equipment, food, furloughs, entertainment and recreation is greater than in the last war. It is undoubtedly true that the problem in this war as a whole is rendered more severe by the prolongation of the war and particularly by prolonged combat without adequate relief. However, the foregoing chart on incidence shows

clearly that high rates in the European Theater occurred in the second month after D-Day as well as after prolonged combat. It is possible that, regardless of the casualty rates, modern warfare is more terrifying, and many would attribute some of the differential psychiatric rates to this cause. The mental hazards of this war are probably greater than even the trench warfare of 1918. There are such factors as new weapons of greater ferocity and killing power, greater rapidity of movement, higher criteria for the ability to take responsibility and make decisions, and higher requirements as to mechanical skill and knowledge. It does not appear, however, that the degree of difference in this respect between this war and the last is enough to explain the wide variance in the neuropsychiatric rates. Finally, there is another major factor, namely that of the emotional conviction as to why we fight. It has been said that in the last war the men seized their guns with enthusiasm and were carried through hardship and danger by the emotional conviction that they were fighting a war to end all wars. In this war such a spirit has been conspicuously absent. The majority of men were drafted in a spirit of resignation; they have felt that there was a job to be done, but they have felt resentful that they rather than someone else were selected to do it. This difference in attitude is perhaps the most outstanding difference in the psychiatric picture of this war as compared with the last. It is now well established that absence of the will to fight, absence of the sense of immediate threat, and absence of anger at the enemy all predispose to psychiatric disorders.

With respect to the interrelation between combat and psychiatric admissions the experience of the two wars is probably even more similar than the statistical material suggests. The theater rates for wounded and neuropsychiatric casualties in Fig. 1 are shown in both the usual form and as index numbers having as a base the average rate for the period in each case. The intimate relationship is evident. The incidence of wounding is an index of the intensity of combat, which is thus shown to determine in large part the incidence of neuropsychiatric casualties in both wars.

⁴ Love, Albert G.: War Casualties, Army Med. Bull. No. 24, pp. 1-177, 1931.

As with so many combat lessons, it was necessary to relearn in this war what was known before the United States entered the first World War, namely, that treatment of psychiatric casualties in the most forward areas is more effective than in rear areas. Psychiatrists were assigned at the divisional level to prevent the evacuation of excessive numbers of men and to return to immediate duty as many as possible. During the first World War 40 to 70 percent were returned to some type of duty in the forward areas. In the present war 40 to 60 percent are returned to full combat duty, and an additional 20 to 40 percent of the cases occurring in combat are returned to non-combat duty in the theater.

It is not only combat which has caused high neuropsychiatric admission rates in the

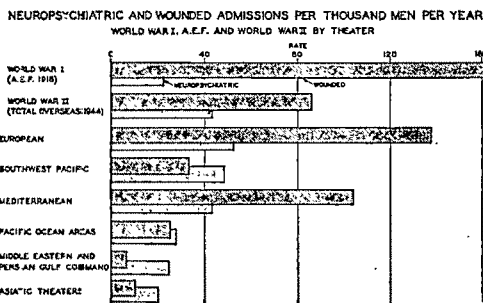


FIG. 2.

present war. This is readily appreciated from Fig. 2 which compares admission rates for wounded and for neuropsychiatric patients for 1918,² and for 1944³ by theater of operation. Only one of the present theaters reports a lower rate than that of the A. E. F. in 1918, although none except the European and Mediterranean Theaters experienced casualties on a commensurate scale. The Southwest Pacific Area illustrates the complexity of the problem for, with an intensity of combat less than half that of the Mediterranean Theater, the Southwest Pacific Area reported a higher neuropsychiatric admission rate during 1944. Thus it is apparent that in overseas theaters, in addition to prolonged combat and deficient motivation, there are other factors which are related to a high neuropsychiatric rate. A considerable number of men have been overseas for three years, many for two years.

They have been subjected to tropical and other adverse climates and have been forced to exchange their normal social and cultural environment for the monotony of the jungles, deserts and isolated Arctic outposts. Thousands have been placed in base areas where they were not fully occupied and felt a sense of purposelessness in their sacrifices. In short, they have suffered more prolonged personal sacrifices on a very much greater scales than did troops in the first World War.

In Fig. 3, neuropsychiatric admission rates for Zone of Interior troops are contrasted with discharge rates for these disorders in the entire Army for the two wars.

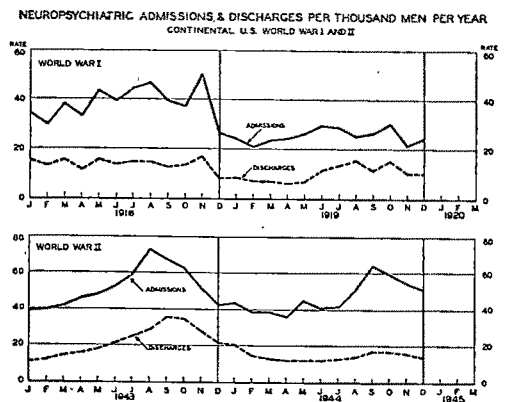


FIG. 3.

Since discharges include patients admitted overseas as well as those from the Zone of Interior, the two rates have very different bases. During 1918 both rates² increased gradually and then, after the Armistice, fell off to entirely new levels. The marked fluctuation in the two curves in World War II³ clearly shows that factors are operating to cause increases in the *reported* incidence of neuropsychiatric conditions that were not present in World War I, for a large share of the neuropsychiatric discharges in World War II have involved patients admitted in the U. S. These factors are changes in administrative policy involving the utilization of manpower which have resulted in the use of non-medical criteria as the basis for defining medical disability caused by neuropsychiatric conditions. These fluctuations cannot be considered as evidence of fluctuations in actual disability even though they

are reported as such statistically. Aside from this effect of administrative policy on the neuropsychiatric rates in the Zone of Interior

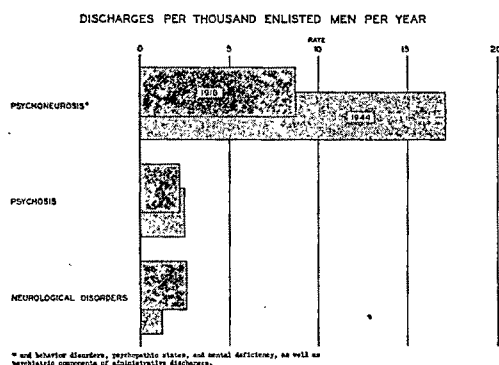


FIG. 4.

in this war, it is believed that poor motivation and morale are most important factors effecting higher neuropsychiatric rates in World War II.

In the last war all discharged neuropsychiatric

noneffectives were given certificate-of-disability discharges. In the present war a significant number receive administrative discharges. A comparison is made in Fig. 4 using the categories psychoneurosis, neurological disease, and other neuropsychiatric conditions (principally psychoneurosis). In order to facilitate comparison with World War I, psychiatric components of administrative discharges have been added to the 1944 discharge rate for psychoneurosis and other neuropsychiatric conditions. It is in the latter category that the greatest difference exists between the two wars. The conditions grouped in this category are also of special interest since the incidence and relative effectiveness or noneffectiveness of personnel with these conditions is more directly influenced by administrative policy and procedure, and by morale and motivational factors than of personnel with neurological disease or psychosis. The 1944 discharge rate for these conditions is twice that for 1918.

PSYCHIATRY IN HANFORD¹

WALTER A. NOEHREN, M.D.

This paper describes the problems of one of the more unusual civilian war time communities and shows, in particular, the need for adequate psychiatric care in such a community.

In 1942, as a part of the program for the development of the atomic bomb, the Manhattan district of army engineers selected the vast desert of the Columbia river basin in the eastern part of the State of Washington as the site for the production plant for plutonium. This was hot desert country, isolated and virtually uninhabited. Construction of the plant began in 1943. Plant units, the now famous plutonium piles, were built in dispersed locations in a 600 square mile area, in the midst of which a construction camp of 60,000 persons mushroomed into existence. This was the city of Hanford, a "rush" town if ever there was one. It's served its purpose for the 1½ year construction period; then was evacuated in 1945 when plant operations began, so that it is now a ghost city. Operations personnel for the plant live in the village of Richland, which has been constructed on the edge of the area some 27 miles from Hanford.

The conditions of life in this city camp were well defined. Because it was so isolated, the city had to be self-sufficient and adequate to keep workers interested in staying there for the duration of the job. The nearest other communities were Pasco, 40 miles distant, with a population of 6,000, and Yakima, 60 miles distant, with a population of 30,000.

Hanford developed rapidly to its full size. Although the maximal population at any one time was 60,000 persons, there was considerable turnover of labor, in spite of efforts to prevent this, and an aggregate of 140,000 persons lived in Hanford during the 1½ year period. The large turnover was due to several factors, chief of which was the unpleasantness of the environment. Terminations were most frequent after the desert

sand storms, so that the storm winds came to be called "termination powders."

There were no provincial mores or traditions to influence life in Hanford except for those brought in or created by the people and by management. The general social structure was simple. The entire project was built by the DuPont Company under contract with the army engineers. DuPont "line management" organizational structure was applied to all aspects of community life, including job, housing, restaurants, medical care, patrol, fire, transportation, schools and amusements. A few army personnel were present on the project, but only to observe that DuPont carried out its contract properly and that military security was maintained. The traditions of the DuPont Company were evident throughout, consisting of considerable pride in company, and in the type of stratification and regimentation which is a part of line management. The authoritative positions were held by men who had been with DuPont previously and who were well versed in "company policy." Most of the people of Hanford, however, had never worked for large industrial concerns and were unaware of the sense of pride which is inherent in such organizations.

These people of Hanford were an heterogeneous lot, recruited from all corners of the United States at a time when the labor market was thoroughly depleted. They were sought out by recruiters who were hard pressed to fill quotas. More people came from the southwest and midwest than elsewhere, but no groups were large enough to maintain their identities. Many came from poor rural areas. Anyone reasonably able to work was signed by the recruiters and given train fare to Pasco. There was no time for recruitment physical examinations or investigations in the field, and even had these been possible, labor was too scarce to allow selection. Many of those who came were excellent workers with good employment records. They were attracted by high wages, the stated importance of the work and opportunity to travel to the northwest.

¹ From the Medical Department, Hanford Engineer Works, Hanford, Washington.

Many, however, were drifters who had never been able to hold good jobs in peace time. Some were escaping unpleasantness in their home environment, varying from simple maladjustments to the difficulties which accompany mental illness or criminal prosecution. Included in this group, for example, were many epileptics who were trying again to get work.

Most of the people came long distances to Hanford by crowded train. They arrived fatigued and occasionally ill. They came then into a desert construction city, an environment truly fantastic and foreign to them. Upon arrival, they were necessarily herded about and required to wait in long lines for the proceeding of hiring, which took a matter of days to accomplish. During the period of rapid growth of the project, more than 500 persons arrived daily, all of whom had to be interviewed, provided housing and assigned to work. They were given preemployment physical examinations, but this was of a cursory kind and succeeded in screening out only a very small proportion of those who later proved physically or emotionally incapable of the work.

The investigation of new employees had to be detailed because of the security problems of this highly secret project. Data were obtained by a special investigations department which interviewed new arrivals, and wrote or phoned to references for further information. The investigations were continued after the initial hiring, and the data obtained in this manner, including records of previous mental illness or hospitalization, proved to be of considerable assistance in the psychiatric work.

Economic circumstances in Hanford were relatively uniform. Everyone was employed and well paid. Many of the persons from poor rural sections made as much money in a few months as they had made in their entire lives previously. There were a few unemployed "hangers on" who stayed in the city after they had been rejected or fired, and there were a few professional gamblers and prostitutes, but these were rounded up by patrol and made to leave the city as soon as discovered.

Living conditions were uniform. There were simple barracks and hutments for men, and slightly more comfortable, but similar

barracks for women. Two persons were assigned to each barracks room and twelve to each hutment, usually without prior acquaintance. Roommates often proved incompatible. Husbands and wives had to live separately if they lived in barracks. There was a huge trailer camp however, where families brought their own trailers. The camp contained 2000 trailers and housed 12,000 persons at its maximum size. Family groups were of varying sizes up to the one family with 10 children, all of whom lived in one trailer. The workers who lived in the trailer camp were a more stable group than those who lived in barracks.

There were separate barracks and trailer camps for colored people, with separate eating and recreational facilities as well. Management sought not to discriminate, but considered it necessary to separate white and colored housing units in the interest of the job. In the hospitals, white and colored were treated equally and on the same wards.

Feeding in this city was accomplished in eight great mess halls, the largest of which was capable of serving 13,000 persons at one meal. Food was served family style, with "all you can eat for 67¢." People had to wait in lines to be seated. Once at the table, and the motion toward the table was a surging, the food was literally reached for and devoured with primitive, competitive haste. The food the first year was poor. Episodes of food poisoning were all too common and would involve upwards of 200 persons in each instance. This manner and quality of eating had a detrimental effect on the emotional tone of the community and influenced the labor turnover. In the course of time, both the serving and the quality were improved, with considerable benefit to the community.

Minimal recreational facilities were developed, not to provide recreation *per se*, but to stabilize labor. These facilities were very limited in the early months of Hanford, but were gradually enlarged. The first "rec" hall was constantly a crowded melee. In one portion of the hall, 1800 gallons of beer were consumed of a normal evening during a four hour period. To buy beer, which was served by the pitcher, one had to be seated, in compliance with the laws of the State of Washington. Since there were only 1200 chairs,

these were in great demand, and as an evening would wear on, a chair could be sold for from two to five dollars. Movies were at first shown in a tent. Later, a theatre was built, and the tent became a church. Facilities ultimately included movie theatres, pool and billiard rooms, bowling alleys, a great auditorium which was dramatically constructed in two weeks time, baseball diamonds, tennis courts, and artificial lake for outdoor swimming.

The goal of Hanford was well defined. Even though the workers did not know what it was they were building in the desert, they knew it was an important, secret war plant which was needed urgently. All aspects of life in the city were subordinate to the building of the plant. All decisions, including those relative to medical care, were measured in terms of what was necessary to accomplish the all important job. Top supervision was preoccupied with the construction of the plant itself and could give only slight attention to the social problems of the community. These problems were delegated to subordinates who were of varied ability and experience.

The DuPont medical division, used to first aid work and industrial hygiene, had never previously dealt with general medical care and had never previously considered the problems of psychiatry. Furthermore, in spite of considerable effort to this end, medical supervision did not succeed in obtaining as adequate or as well trained a staff as was sought. In the hectic winter months of 1943-44, there was a ratio of only one physician for each 3,000 of population at Hanford. There was no physician with any training in public health, and there was no board member in any specialty.² With these handicaps, medical care became a difficult problem. Care was given on a private practice basis, the physicians pocketing the fees in addition to a salary. Fortunately, the flu epidemic of 1943 was mild in Hanford. The most serious

threat was an outbreak of meningococcic meningitis. Fifty-two cases of this disease occurred, with 8 cases in one week. No isolation hospital unit had been planned and infectious cases had to be cared for in a makeshift facility converted from a barracks.

At the onset, it had not been thought that there would be need for special consideration of psychiatry, even despite the forehand knowledge that the project would be large, and that it would contain an heterogeneous, subnormal population placed in a difficult environment. Those in authority felt that the problem would be small, and that it could be handled by general practitioners using ordinary hospital facilities. Thus, during the first six months, mental cases, when recognized, were treated by whatever doctor happened to receive them under his care and were placed in a general hospital ward or room, or were detained in jail. Such patients were guarded by patrolmen, who had no training or experience in such matters and who even wore their guns, for example, while attending disturbed patients. Ambulatory patients, referred to the medical department because of abnormal behavior, were briefly and inexpertly interviewed, and little was done to help them. Many persons with mental illness were handled by patrol, arrested or discharged from their jobs, escorted to the limits of the reservation and quickly forgotten. These unfortunate persons then often became involved in difficulties in nearby communities, for they were stranded there, mentally ill, far from home, and without resources.

In spite of these facts, it was not particularly apparent to supervision that there was anything amiss. There was an awareness that problems existed, but Hanford was simply considered a rough town. Winchell advised mothers not to let their daughters go there. Neighboring communities were unhappy about Hanfordites. The unfortunate persons who were ill suffered from the inadequacy of their care, but the situation was not unique, for it exists similarly in many communities throughout the country today.

To remedy these matters, and under force of necessity, a psychiatric service was developed by the medical department in February 1944. The care of hospitalized psychiat-

² This is to be compared with the companion area of the Manhattan district at Oak Ridge, Tennessee, where medical care was given by a carefully selected group of army physicians, including qualified specialists, and including a 5 man department of psychiatry. Cf: Clarke, Eric K. Psychiatric problems at Oak Ridge. *Am. J. Psychiat.*, 102: 437-444, January 1946.

ric cases was centralized in a makeshift barracks unit neighboring the barracks which had been adapted for contagious cases. This was possible more because mental cases were considered undesirable and unremunerative by members of the staff rather than because of any administrative plan. The temporary facility was inadequate, as is illustrated by the following two cases:

CASE 1.—A 35-year-old single colored male laborer, who was said to have often behaved strangely in his home community, a small town in Louisiana, was recruited and sent to Hanford. No further past history was obtainable, and this much was by hearsay from others of the group who had come with him from the same area. He was said to have been quiet and to himself in the four day journey. On his first evening in Hanford, he was an innocent bystander to a fight, and became involved in the brawl which developed. He was arrested with the others and taken to jail, which was crowded at the time. He became terrified, and believed he was to be lynched. He became highly disturbed and continued so all night, praying and shouting. The other prisoners in the same cell feared him and were unable to placate him. He was transferred to the psychiatric barracks. The two rooms which had been reconstructed for disturbed patients were occupied so that this man had to be placed in a regular room. He was disoriented and spoke incoherently. It was impossible to converse with him and difficult to examine him. There were no evident physical abnormalities. Pupils were dilated, reacted to light. Reflexes were normal. Two hours after admission he succeeded in breaking the lock to his door and escaped the building, evading the patrol attendants. He was pursued for over a mile, but was apprehended when he attempted, in his desperation, to swim the Columbia river.

CASE 2.—A 26-year-old single male patrolman, who had been employed for two months on the patrol force, suffered a convulsive episode which was followed by a post-convulsive psychotic state. He had a past record of similar episodes with commitments to state institutions and, in addition, was an escaped criminal. He had falsified his past record when being interviewed at the time of hiring, and the investigations department had just received the first report of his past irregularities at the time he became ill. He was detained in one of the reinforced rooms. Commitment was sought on the third hospital day, but he demanded a trial by jury, which was his right in the State of Washington. Two days later, having obtained matches somehow, he set fire to his mattress to distract the guard, and made his escape. The fire was brought under control, but after some concern, for the building was highly inflammable.

Later, a new hospital building was constructed to replace all of the temporary bar-

racks facilities. The new unit contained a modern, 25-bed, psychiatric ward of excellent design. It was completed by June 1944, ten months after the onset of the Hanford project.

The work of the psychiatric service was severely limited by the lack of time and personnel. At most, the half-time of one physician and the full-time of one nurse social worker was all of the professional personnel available, with additional regular nursing staff as required for hospitalized patients.

Because of the simple governmental structure of Hanford, with all phases of community life controlled by the various departments of the same company, close cooperative effort between these departments was easily possible. In psychiatry, very helpful cooperation was available with general medical care, with investigations, with patrol and with military intelligence. The investigations department referred directly to psychiatry any individuals whose past history or present behavior appeared remarkably abnormal. Psychiatry, furthermore, was able to obtain from investigations considerable data concerning any person needing care. Patrol, likewise, referred persons of abnormal behavior directly to psychiatry, or asked opinion concerning individuals in jail whose behavior was unusual. A lecture on psychiatry was included in the patrol training course. The advantages of the coordination of effort of patrol and psychiatry became increasingly evident as the program evolved. The police problems of Hanford were of themselves of considerable interest. They were disproportionate to the size of the community with a higher incidence of crime in some periods than Seattle, which has a population of 700,000.

One of the most interesting aspects of the psychiatric work in Hanford was the fact that in this civilian community in which the conditions of life were measurable and uniform, all of the citizens were under close scrutiny both as concerns their past records and their present behavior, so that one could reasonably measure the volume of the psychiatric problem.

Alcoholism was one of the more difficult problems of concern to both patrol and psy-

chiatry. The nearest liquor store was in Pasco, 40 miles away, but this did not prevent the consumption of a large quantity of spirits in Hanford, in addition to the beer sold in the "rec" halls. There was considerable bootlegging, twenty dollars being the standard price for a quart of liquor. Wine was imported in some quantity. It is said that one individual even tried to establish a still in his trailer. Patrol constantly prosecuted this traffic in liquor and undoubtedly succeeded in preventing more widespread difficulty.

There were many chronic alcoholics in Hanford, a large number of whom came into difficulty. Some were simply discharged from their jobs and escorted off the reservation. Intoxication on the job was not tolerated. Drunkenness in off work periods was tolerated when not creating a public nuisance. The more severe alcoholics, who became ill, had to be hospitalized and cared for. The administration was loath to hospitalize cases of uncomplicated alcoholism, since it was felt they could be kept overnight in jail and then be discharged. Hospitalization for as long as four days of patients with delirium tremens was criticized. Furthermore, alcoholism, even of marked degree, was not admitted to be a disease entity adequate to allow these patients to be given their return fare home. (It was a general policy that persons incapable of work because of disease or disability which antedated their employment, would be returned to their homes at government expense.) The administration was fully aware of the inadequacy of its approach to alcoholism and sought constantly to develop logical policies. In any large community this problem is difficult at best. It was more so in a city camp like Hanford with its rough population, its drab environment, its haste and urgency.

The following data indicate the volume of work done by the psychiatric service in a sample period. These data are for the month of May 1944, at which time the population of Hanford was at 60,000.

One hundred and sixteen cases were admitted to the hospital psychiatric service during that month. Of these 116 hospital admissions, 28 were given medical termination of employment, and 15 were rejected for employment. All of these were returned to their homes at government expense, with escort where necessary. Six patients were committed to mental institutions in the State of Washington. Of the rest, most were advised to return to work (usually under closer supervision or in a different and more suitable job). During the same period, 81 patients were seen as out-patients. Of these, 3 were given medical termination, and 5 were rejected for employment. Eighteen were advised to terminate voluntarily, and the remainder were advised to continue at work.

The diagnoses on hospitalized cases were as follows:

Alcoholism	60
Epilepsy	19
Psychopathic personality	7
Schizophrenia	16
Psychosis, type undetermined.....	5
Paresis	1
Observation (no diagnosis).....	8
Total	116

SUMMARY

The psychiatric experience in Hanford, Washington, a community of 60,000 persons which existed for 1½ years during the construction phase of a war plant situated in a drab, isolated, desert environment, is related. The need for a planned psychiatric program in such a community is demonstrated.

MEN WITH BRAIN DAMAGE

JOHN A. AITA, CAPTAIN, M. C., A. U. S.

The over-all picture of war casualties permits some segregation of anatomical-functional groups. We speak of amputees, the blind, the paraplegics, the plastics and head injury cases as groups requiring special care. The army neurological-neurosurgical center has among its main problems that of men with head injuries. One portion of this great problem concerns the treatment and rehabilitation of men with known and often severe damage of intracranial structures. These men with skull defects, intracranial foreign bodies, hemiplegias, visual loss, convulsive seizures and impairment of cognitive and other personality functions must remain under close supervision of the neurological-neurosurgical service for careful evaluation of the healing of their wounds and actual disability, and for definitive treatment.

This war has permitted us to study intimately large groups of young, healthy men with severe alteration of intracranial structures, who, for the first time in history, will live and somehow adjust because neurosurgical skill and control of infection now allow them to do so.

Of 500 consecutive admissions of cranio-cerebral injury to an army general hospital, 200 (40%) were determined to have *proven* brain injury by surgeons' notes and neurological findings. Of this 200, 64 (32%) were considered markedly disabled by reason of severe and often multiple deficits. The following are examples of such cases.

ILLUSTRATIVE CASES

1. Twenty-four-year-old white male, severely injured in automobile accident 4½ months prior to entry. Severe fracture of right frontal bone with destruction of both frontal lobes, particularly right. Unconscious 4 days. Displayed many decerebrate features for several weeks. Delirious and amnesic 45 days. On arrival, examination revealed huge right frontal skull defect. Morose, immobile facies, anosmia and other minor neurological signs. Complained only of headaches. Quite depressed over plight and death of brother in this accident. Bewildered, introspective and sensitive. Much cosmetic restoration to be done. Wechsler-Bellevue intelligence scale revealed definite slip from pre-

vious attainments although mental age was still average adult. Marked loss of abstract thinking ability. EEG tracing demonstrated focus of very slow waves in the right frontal region.

2. Twenty-four-year-old white male admitted 4 months after being wounded by shell fragments in the right frontal region; penetrating to right occipital region. Unconscious 24 hours and subsequently amnesic for a prolonged but undetermined period. On entry, chief residuals were left hemiplegia and astereognosis. Appeared dull, shy and retiring. EEG tracing showed generalized abnormality. Wechsler-Bellevue scale revealed considerable fall from previous attainment and organic type performance. Mental age dull normal. Rorschach responses classically organic.

3. Twenty-six-year-old white male incurred injury 2 months prior to entry when heavy tank hatch cover fell on head. Incurred severe depressed fracture of the right frontal bone including roof of the orbit. Had no idea what happened. Unconscious 2 days. Amnesic for undetermined period. Destruction of the right frontal lobe and optic nerve. On arrival, complained of visual loss in one eye and polydipsia. Examination revealed destruction of right optic and oculomotor nerves, bilateral anosmia, and left hyperreflexia. Naive good humor. Diabetes insipidus. Psychological performance average adult but could not be considered organic.

4. Twenty-four-year-old white male, wounded by shell fragments 6 months prior to entry. Struck in left parietal region, penetration to right occipitoparietal region. Also incurred severe laceration of right arm and fractured humerus. Aphasia and visual loss evident early. Unconscious less than one day, denied more than a few days' amnesia. Tantalum plates inserted to cover skull defect on three occasions to date, each time removal necessary because of infection. Recent right Jacksonian seizure. Neurological examination revealed slight aphasia residual, right hemiparesis and dyspraxia, left Babinski and right lower homonymous quadrantanopsia. Appeared simple, dull, childlike, anxious and complaining. Psychological performances indicated dull normal intelligence, definite slip from previous attainment. EEG tracing showed only scattered 6 to 7 per second waves with higher voltage in right temporal region.

5. Twenty-two-year-old white male entered this hospital 3 months after wound by shell fragments. Penetration in left frontal region to at least left lateral ventricle. Also incurred severe frostbite with gangrene of several fingers. Amnesic for 6 weeks and incontinent several months. Upon arrival he was severely aphasic, blind in the left eye and bedridden because of severe right hemiplegia. Actions bespoke frontal lobe deficit. EEG indicated generally disturbed, slow record with higher voltage in left temporo-occipital area. Psycho-

logical tests revealed high average to superior performance.

6. Twenty-year-old white male entered 7 months after wound by shell fragments which struck right occipital region, penetrating to left frontal lobe. Also incurred compound, comminuted fracture of right radius. Unconscious 6 days and amnesic 6 weeks. In decerebrate rigidity for many days. On entry, severe right hemiplegia and marked paresis of the left leg noted. Cortical sensory loss in the right extremities and left homonymous hemianopsia. Unstable emotionally, raged easily, but at other times happy and vociferous. EEG tracing showed generalized disturbance with focus in left occipital region. Psychological tests indicated performance at high moron level.

7. Twenty-one-year-old white male wounded by gunshot in right occipito-parietal region 8 months prior to entry. Unconscious 7 days, amnesic one month. For long time, felt he would not live. Developed hernia cerebri, much local infection, necessitating excision of right occipital lobe. Long bedridden, emaciated and decubitus ulcers. Examination revealed severe left hemiplegia, cortical sensory loss and left homonymous hemianopsia. Extremely depressed, painfully aware of situation, petulant. EEG surprisingly revealed only moderate, generalized abnormality. Psychological investigation revealed much disturbance particularly in all performance tests that could be given. General retardation at dull normal level.

8. Twenty-one-year-old white male wounded by gunshot 2 months prior to entry. Struck in right parietal and vertex regions. Recalls being struck. Became unconscious only many minutes later. Subsequent amnesia of undetermined length. Hernia cerebri. On arrival, demonstrated triplegia and use only of left upper extremity. Cortical sensory loss. Incontinent. Facial expression fixed. Conversation naive and anxious. Emotionally unstable. EEG revealed generalized slow waves with larger voltage in right occipito-parietal region. Psychological performance left no doubt as to deficiency in all tests which he was able to take. Dull normal intelligence range.

9. Twenty-six-year-old white male wounded by shell fragments 3 months prior to entry. Penetrated deep in left occipito-parietal region, past mid-brain and into right frontal region. For many weeks after was moribund, with clonic contractions of left upper extremity. On arrival, had left hemiplegia with cortical sensory loss, right anosmia, slight residual aphasia, left homonymous hemianopsia and other obvious intellectual losses. High moron level. Appeared dull, shy, placid, slept excessively.

10. Thirty-year-old white male wounded by shell fragments 3 months prior to entry. Penetration left occipito-parietal region, to the left lateral ventricle. Recovery complicated by infection. On arrival, examination revealed a right homonymous hemianopsia, multiple agnosic-apractic disturbances and right hemiparesis. Dull, placid, contented. EEG tracing revealed generalized abnormality, more marked on the right. Psychological evaluation, high moron level.

Seeing such cases arrive at our hospital day after day, 2 to 6 months after injury, we were struck by two things: First, by what the human brain can take and recover from; second, that there is more here than a mere dissolution of nervous pathways to be clinically labeled "posttraumatic encephalopathy."

Brain damage of any severity results in a major disorganization of personality. Overwhelming liabilities and deficits become manifest. Agnosic-apractic disturbances may occur, gross or subtle. There is often a general lapse to a more childlike level of thinking. Higher social sensitivities and responsibilities diminish. Interest and planning are deficient. Mood control becomes unstable or erratic. Rebelliousness or passive acceptance of invalidism may appear. There may be a general intellectual slump or more specific intellectual abilities may be outstandingly deficient, such as the ability to handle abstract concepts(1).

However, let it be known that men with even severe brain injury as described do not usually deteriorate to the intellectual level of morons, imbeciles or "dements." We saw only 3 patients (among 64) whose general intellects were so impaired that they might ultimately require guardianship. Many men had slumped, broadly speaking, to just an average or dull normal level of general intellectual performance. Those with previous good attainment suffered less, however, as they apparently had a greater margin of safety or "further to fall." It was common to find that a particularly dull individual had always been dull.

Among men with brain injury, we came to look more for losses of specialized intellectual functions than for wholesale devastation. Unless this scrutiny were undertaken, many would give the impression of little disturbance in general intellectual function.

Psychological tests(2) of intellectual components reveal loss of ability to analyze and synthesize. These patients are unable to change their method of attack on problems or to shift their attitudes or concepts. Memory defects are manifest for concurrent or new situations. They show a lack of anticipation, organization or planning ability. They are unable to deal comprehensively with variables, more than one aspect or dual relation-

ships. It is difficult for them to handle new problems, especially those not depending on old information and habits. Attention and concentration are impaired though these may be related to anxiety. Their thinking often shows evidences of helpless repetitiousness, stereotypy or actual perseveration. They try doggedly, often recognizing their inadequacy, but are helpless to change their attack. They proceed with much uncertainty. They are often easily distractible. Insight is sometimes painfully existent. Reactions of anxiety, hypochondriasis, depression, and occasionally even hysteria are evident among this group.

However these many liabilities do not remain rigidly set or go unbalanced. Just being alive, just living in a ward will serve to change things. In each case, a dynamic reaction takes place which is unique and individual.

The reaction of the total personality to cerebral deficit depends upon several inseparable variables. On the one hand, there exists the trauma and alteration produced by it; on the other hand, the personality who experiences these things. It is reasonable to believe that there are no two human brains quite alike. The life experiences, conditioned reflexes and delayed reflexes of each person have made his own brain unique and, if anything, unpredictable. A great deal depends upon what was in that brain that was injured. There are beaten paths, conditioned reflexes, associative pathways and experiences that are the sole property of the individual involved. Many symptoms or personality difficulties appear merely as expressions of a struggle of the altered personality to cope with defects and demands it can no longer meet. As Goldstein(1) previously pointed out, adaptation depends on the severity of the handicaps and the degree of readjustment possible. Indeed if the defect is severe (for instance, the patient is blind), ultimate expectations are less, and usually the patient manages well. He seems to compensate easily and loses realization of his defect. However, if part functions remain, if he is only mildly hemiparetic or partially deaf, the ultimate adaptation may be more difficult. It may be easier for the totally hemiplegic to adjust to his total loss once and for all than

for the partial hemiparetic to make an "on the fence" adjustment.

Once these patients were settled in the ward, and the routine going, they were easy to manage. Their dogged perseverance and seriousness of purpose soon manifested itself. There were few disciplinary problems among this group, in contrast to other groups of wounded patients in the hospital. Minimal complaint was expressed of paralysis, hemianopsia or aphasia. In some men, excessive orderliness became an apparent manifestation of their concrete attitudes.

The frequent admission of men with brain injury soon brought about the realization that something more was in order than routine neurological evaluation, neurosurgical considerations, occasional psychological testing and routine assignment to physiotherapy and occupational therapy. As we saw increasing numbers of these patients, we felt that many of them could be steered from institutional care. However, this would require planned assistance for these men to readjust with wounded brains and personalities. It was our impression that *all* of these men, and not just the aphasic, required special care and effort.

It was soon apparent that a more concerted program would assist greatly in determining and understanding the true state of disability in many men, including those less severely disabled. The bare necessities of a history, neurological examination, EEG tracing and pneumoencephalography often presented a mechanistic summation which left much to be desired. Thus the program to be described became valuable as a means of evaluation of the man and his disability. It was useful for those who had to remain hospitalized for a long time just for physiotherapy, insertion of tantalum plates and observation. It proved of great value among men who wanted to know if they could proceed with advanced education despite brain injury.

Over a period of several months, the following program of evaluation and therapy was developed for men impaired because of brain injury. No portion of this program is new or unique. It represents only an integrated and enthusiastic approach to restore the experience of usefulness, social acceptance and happiness in any individual long ill

and struggling with a residual disturbance of important function. Such a program could be used for any group of patients hospitalized for prolonged care (orthopedics, cardiac, tubercular, paraplegic, blind, psychotic, etc.).

BASIC EVALUATION

With the admission of each new patient, we set about to find out what had happened to this man and what was the existing pathology. Many answers were supplied by careful neurological history taking and examination. Field medical records were scrutinized for details of how the man was wounded, the extent of damage found, the surgeons' notes and previous examinations. How helpful it was when neurosurgical teams indicated even on crude anatomical drawings where the lesion was and how extensive it was. The patient, too, was plied for historical data. Where was he when he was wounded? What had he been doing? What does he recall of being struck? When did first islands of memory appear? When did amnesia clear up entirely? What symptoms persist? After his chief complaints were described, we found it well to go over a neurological and psychiatric inventory to be sure nothing was forgotten. General medical and certain orthopedic symptoms were also sought. Skull x-rays were examined and when available, the initial films following injury were rechecked. Electroencephalographic tracings were obtained. Where indicated, spinal fluid examinations and pneumoencephalography were performed. Injuries elsewhere, which may have been overlooked, were always kept in mind, particularly those to the cervical spine. The possibility of intracranial infection and hematoma posed themselves for consideration in many cases and had to be ruled out. Close cooperation with the neurosurgeon in problems of poorly healed wounds, skull defects, depressed fractures, foreign bodies, infection, suspected bleeding and decubitus ulcers was maintained.

CAREFUL PSYCHOLOGICAL TESTING

This was directed toward obtaining information regarding the adjustment of the individual to his loss. We strived to obtain some

tangible level or base line of intellectual functioning. Many cognitive impairments could be tested. These included agnosic-apraxic disturbances, Gestalt perception, the ability to handle abstract concepts, recent memory function, etc.(2, 3). The simplest measure that could be accomplished in each case was administration of a complete standard intelligence test such as the Wechsler-Bellevue scale(3). At times we found it helpful to obtain base lines of simple, practical reading, writing, spelling and arithmetic ability by use of standard grammar school achievement tests(4). Once base lines were established, the patient's present state of deficit could be comprehended and progress measured from this point. The Rorschach tests(2) gave valuable information concerning special intellectual deficits as well as other personality dynamics in operation. Some patients eventually took vocational interest and aptitude tests to assist in re-education.

PSYCHOSOMATIC ORIENTATION

This is directed toward knowing and understanding the patient who had the injury. Such orientation was fundamental in handling men with brain injury. Personality traits, attitudes and conflicts were important to recognize early as the individual strived to readjust with a wounded brain. Who was this person before he was hurt? What were his military experiences? In what setting was he injured? What were his present worries and concepts about himself? Were there other situational problems, especially at home? What formulations had been given him so far? What were his outlook and tentative plans? Who was this person now, adjusting to these pertinent experiences and intracranial alterations? Often the personality and individual brain involved were more potent factors affecting recovery than the lesion or its extent.

Social service investigation assisted greatly in these matters. Through this we learned much of the patient's previous assets or liabilities, and whether there had been a personality change now evident to others. We learned also to what kind of home situation he would return, and what plans his family had in mind. Were there local resources and

assets in the community which might continue his rehabilitation?

SPECIAL RECONDITIONING AND RE-EDUCATIONAL PROGRAM

Instead of endeavoring to fit these men into the general hospital reconditioning and re-educational program, we found it best to put the group under the supervision of one man who in turn was supervised by the medical officer. Best qualified for this work was a man who had teaching experience as well as some training in psychology. He had to be sensitive to personality concepts, limitations, interests and attitudes of each patient. He functioned as the master co-ordinator of such things as occupational therapy, physiotherapy, educational movies, exercises, swimming and various instruction. He saw to it that each patient attended on schedule. As an instructor, he taught certain subjects, and assigned patients to other instructors in the hospital for more specialized subjects (typing, piano, Spanish, woodwork, radio, refrigeration, etc.). This man assisted the medical officer greatly in collecting information about each patient and his progress. The subjects taught and goals were practical and not academic. We tried to fit them to each patient and his likely vocational choices. Often they concerned just the fundamentals of reading, writing, spelling and arithmetic. This approach aided materially in an acquaintance with a patient which otherwise would have depended only on psychological test scores.

THE EMPLOYMENT SPECIALIST

Every army hospital has an office headed by the separation-classification officer who assists patients in plans for vocation or education. We found the more concerted interest and co-operation of this office valuable. Patients were turned over to this officer as soon as they appeared sufficiently rehabilitated and when their discharge appeared imminent within the next month or two. Non-confidential information obtained by medical examinations, psychological tests, social service investigation, and instruction of the patient were efficiently funneled to this officer. He in turn furnished the medical officer with

practical advice concerning specific vocational and educational possibilities for which the patient might be suited. Patients were consistently interested in the practical details concerning employment possibility, job classification, further education, and the like. They enjoyed batteries of tests designed to indicate skills, aptitudes and interests.

FORMULATION AND EXPLANATION TO THE PATIENT

These men want to know how they have been injured and what it will mean. Often they have obtained many misconceptions and hearsay which they may not spontaneously bring out. It is well to know what these are, and to ventilate them. Some feel that head injury leads to insanity or brain tumor. Many have already heard that convulsions (or "black-outs" as they often refer to them) may follow injury such as theirs. To many patients, this possibility must be frankly acknowledged, and explanation given as to why these occur. These men can be told that they occur only (as late and persistent problems) in a relatively small percentage of men with injuries such as theirs; usually this phenomenon recurs infrequently, it is only episodic and transient with full recovery; it is usually no indication of impending insanity, deterioration or further paralysis. Optimism is necessary, and nothing must be done to bring about apprehension and preoccupation of things that *might* happen. These patients can be told that, if spells of unconsciousness do occur, there are definite things to be done about them in the way of medicine and surgery. They must know that the medical profession is learning more about the management of these phenomena as investigation proceeds. In general, we find the formulations given by Putnam in his excellent book (5) valuable. We see absolutely no excuse for referring to these occurrences as "epilepsy." Seizures produced by intracranial scars are not indications for invalidism or advice to take it easy and not work. Healthy adjustment to an infrequent, recurrent, brief lapse of consciousness comprises an important portion of the therapy in these men.

These men know also about pneumoencephalography (the "air test," as they refer to it). They fear it. In this procedure are

bound all the folklore and superstition of the spinal puncture, plus the additional trauma of "draining the brain dry" of an important fluid, and then "blowing air into it." As early as possible after admission, the patient should be told that likely he will not need this procedure, and it can be dismissed thus. Where it is needed, this should be announced within 24 hours of its accomplishment and carefully explained in a manner to allay anxiety and misconception.

Headaches, dizziness and anxiety symptoms should be explained physiologically and psychologically to these men. Their importance as indicators of severe brain damage or poor prognosis should be deflated.

An intelligent patient will sometimes inquire, "Why should I struggle to rehabilitate myself, if it will only cut down on my pension?" We have reason to believe that those seriously impaired will not have pension readjustments to worry about, regardless of how well they are employed in the future. To the others, we must frankly state that they will soon come to know that a pension is not everything in life; that as young, aggressive individuals they will find it far more enjoyable working for \$120 a month than whiling away time on a pension of \$80 a month. It can be pointed out that mature individuals prefer opportunity rather than dependence upon government checks.

By work and action these patients must learn that they are expected to be able to do certain things. Morbid fears, pessimism, hypochondriasis, passive resignation to invalidism or abnormal behavior must not stem from the experience of having been injured in the head. There is usually little need for the patient to know about EEG tracings or pneumoencephalographic findings. These usually represent lurid details which he is not equipped to judge or understand.

THE PATIENT'S RELATIVES

Wives, parents and others are likewise concerned about the nature of the injury and what it means. The attitudes of families can devastate or richly nourish efforts directing the patient's recovery and future. These individuals are as much in need of formulations expressed above as are the patients. When the family could not come to the hospital, we

found the Red Cross of great assistance in transmitting concrete, individualized formulations to them. It was best when these things were done as soon after the patient arrived at the hospital as possible, before time permitted misconceptions to develop and set.

THERAPEUTIC TRIALS AT HOME

Recovery and stabilization eventually suggest that a change of routine is advisable. We found it valuable to send the patient home for several weeks. This proved helpful in several ways. It permitted his family to get acquainted with him and his handicap. He in turn became acquainted again with his home setting. Plans could then be made in a more practical light and future difficulties anticipated. On return to the hospital social service investigation immediately obtained a report of what transpired while the patient was home. Resulting information was exceedingly helpful in further planning.

PHYSIOTHERAPY, EXERCISE AND GYMNASIUM ACTIVITY

The medical officer maintained regular check on physiotherapy and exercise activities. Those with paresis or paralysis found the swimming pool a valuable adjunct. With the assistance of the reconditioning department, an athletic assistant was put in charge of each helpless patient in the swimming pool. The entire swimming program was co-ordinated by a physiotherapist. In all of these activities, progressive management and the patient's active participation were sought. At least once a month, a careful objective study of the amount of weakness and spasticity of all involved muscles was tabulated.

OCCUPATIONAL THERAPY

This was devised in a special class for the group to aid in retraining of muscle skills, and to give the patient a daily sense of accomplishment. Mental as well as physical stimulation was sought.

JOB THERAPY

Several weeks or months before discharge, when the patient appeared ready for

it, he was assigned to a part-time or full-time job on the post. Previous arrangements were made with various departments by the man in charge of reconditioning. Many types of work were available, sedentary and ambulatory, in the library, baggage room, stenographic pool, admitting offices, etc. Each job was selected with the man's limitations and needs in mind. It was carefully explained to him why this was done, *i. e.*, not as a stall in his discharge, but as a final test to ascertain whether he would continue to need a lot of doctoring, how his strength and stability were, and if he would continue free of distress under more normal conditions. This was a trial period. Special pass privileges were arranged for men who worked on the post in this manner or other privileges could be awarded occasionally.

CASE CONFERENCE

Once a week, an hour's conference was held with the man in charge of re-education and reconditioning, the social service worker, the occupational therapist, the physiotherapist, ward nurse, psychologist and separation-classification officer. Here individual case problems of rehabilitation, progress and future plans were discussed. The medical officer learned what everyone was accomplishing and what progress was being made. He then directly advised, instructed and coordinated all of these efforts.

FOLLOW THROUGH

The rehabilitation of these patients must not stop the day they leave the hospital. There is a need to carry therapy and rehabilitation over into civilian life. This man's family, his family doctor, local and state agencies, Veterans' Administration, and industry must know this. We have found that nothing can take the place of a wise, understanding family. A job, however simple, if it does not tax the patient's remaining assets, is exceedingly valuable especially after a period of readjustment as a civilian after discharge.

It is important for the family doctor to continue with a careful understanding of the personality involved, stressing good adjustment to a handicap and avoiding concepts of

invalidism. It should be recognized by physician and patient alike that the brain (like other vital systems) provides a margin of safety whereby alteration of some portions may effect little functioning deficiency. It is unwarranted to assume that brain damage must equal disability gram for gram or percent for percent. Adjustment of the individual suffers when evaluation and therapy are based only on EEG abnormalities, pneumoencephalograms or reflex changes.

CONCLUSION

Merely doing fundamental neurological evaluation and giving neurosurgical consideration, then assigning patients to physiotherapy and reconditioning do not effect understanding or sufficient therapy for men with brain damage. Groping for reintegration, these wounded personalities must be considered as a special group needing stimulation and direction. They and those who work with them must be given healthy, reasonably optimistic conceptions and plans. Feelings of hope, usefulness and of being restored to the community as respected adults must be instilled.

Old concepts of organic dementia and deterioration are not strictly applicable to these men, even those most severely injured. They are young, and their brains are healthy. We are struck by an inherent force of restitution, stabilization and improvement, but we have found that it needs stimulation and direction. The deficits of these men need not as yet be regarded as permanent, static, and least of all progressive. Many possibilities exist for re-education, restoration and healthy adjustment. Although oversimplified and unproven, the theory that there is a reserve of cerebral neurons which can be re-educated is a helpful concept. The human personality is versatile in its ability to adjust with losses and to losses.

We have felt that our efforts were amply rewarded by the progress these men made. Physical strength and agility reappeared as did handwriting, reading, spelling, mood stability, poise and self-confidence. The triplegic walked with a cane; the hemiplegic drove his father's tractor. They felt useful again and could plan now for the next 25 to

50 years. They had an understanding about themselves that was wholesome.

Of 64 severely injured patients (as described), only 4 had to be institutionalized, 3 for severe physical helplessness (triplegias, extensive cerebellar damage) and 1 for intellectual deficiency. The remaining 60 were discharged, ambulatory and confident, directly to their homes.

We do not intend to be carried away by optimism, for we shall never rehabilitate most of these men to where they will be entirely self-sufficient, steadily employed, or "as good a man as before." However, we saw no patient for whom immediate, simple relegation to institutional care was necessary. We saw no case in which such a pessimistic disposition was warranted. We saw no man for whom a great deal could not be done in the way of active restoration and rehabilitation. Such viewpoint, however, has necessitated vigor and healthy optimism directed toward understanding these men as individuals and individuals adjusting to certain losses and experiences. It has necessitated keeping them busy socially, mentally and physically. It has necessitated steering clear of, and fighting, invalidism, apathy, stagnation and neurotic adjustments to a handicap, conditions to which men with head injuries are very susceptible.

We have learned that it means little to save a life, to cover a skull defect, and to give a man veterans' compensation if the adjustment and reintegration of that individual are neglected. The job is only half done if he is merely diagnosed and labeled, routinely assigned to this or that program, sent to physiotherapy and occupational therapy in isolated fashion, and then disposed of as a pathetic product of war to his home or to drab institutional care. The wounds are fresh and the patient young. We must deal with both now and not 2 or 5 years hence. Let us again seriously consider what constitutes maximum benefit of medical care in these cases.

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JAPANESE MILITARY PSYCHIATRY IN KOREA

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These impressions and statements concerning Japanese military psychiatry are based on an interview with Dr. Kijoto Kawaguchi, a thirty-three year old lieutenant in the Japanese medical corps who was born in ill-fated, atom-bombed Hiroshima and lived in Korea for twenty-five years. After graduation from Keijo (Seoul) Imperial Medical School in 1937 he trained in the neuropsychiatric section of the University Hospital for five years. He received no psychoanalytic training. He then established his own private mental hospital for six months until called into the Japanese Army in 1942. Following custom he served as an ordinary soldier equivalent to our American private for eleven months, receiving a basic army indoctrination before he could begin practicing as a neuropsychiatrist.

The Keijo Military Hospital had a maximum capacity of 1500 beds. At the time of this interview in September, 1945 the patients numbered 1100. Soldier patients from the entire vast north and central China fighting fronts, and Korea itself, streamed to the hospital for definitive treatment. The writer's assignment to evacuate all Japanese patients and hospital personnel to Japan enabled him to gather the information for this article.

NEUROPSYCHIATRIC SECTION

When the hospital closed there were only 22 patients in the neuropsychiatric section. The normal capacity was 50 beds and a maximum of 120 mentally ill could be cared for adequately.

The physical components of this department would be judged inadequate by American standards. Small, barred windows were set high in the wall of a fourteen by twenty-two foot room housing 8 patients. The others cramped into tiny quarters. Filthy straw mattresses were closely packed side by side around the room, leaving only a small space in the center of the room. The rest of the

wood floor and dirty-grey walls were bare, badly in need of fresh painting. The psychiatric examining and treatment room was also used as living quarters for Lt. Kawaguchi. There was no recreation room. Formal occupational therapy or therapists did not exist. An active physical therapy program was carried on, averaging three hours per day for each patient. This consisted of scrubbing, walking, general cleaning and farm work.

TYPES OF PATIENTS

The 22 mentally ill soldiers were diagnostically classified as follows:

Schizophrenia	6
Hebephrenic	5
Catatonic	1
Dementia paralytica	3
Manic-depressive psychoses	3
Manic	1
Depressed	2
Mental defectives	3
Psychoneurosis	7
Hysteria	7

TREATMENT

In the writer's lengthy discussions on therapy with the Japanese psychiatrist, no new forms of treatment were found to be in use.

1. Electric shock: This mode of therapy was given to all types of patients, with the treatment time varied to suit the patient's condition. In general, excited patients were given two to three treatments daily, while "gentle" patients received two to three shocks weekly. The Japanese officer gave approximately 3000 treatments while serving with the army and 10,000 as a civilian.

Mechanics: The shock machine used by the Japanese is far simpler in appearance and operation than our multi-dialed apparatus. There is no real control of the current given for each treatment. Copper electrodes are set flat into the inner sides of a U-shaped

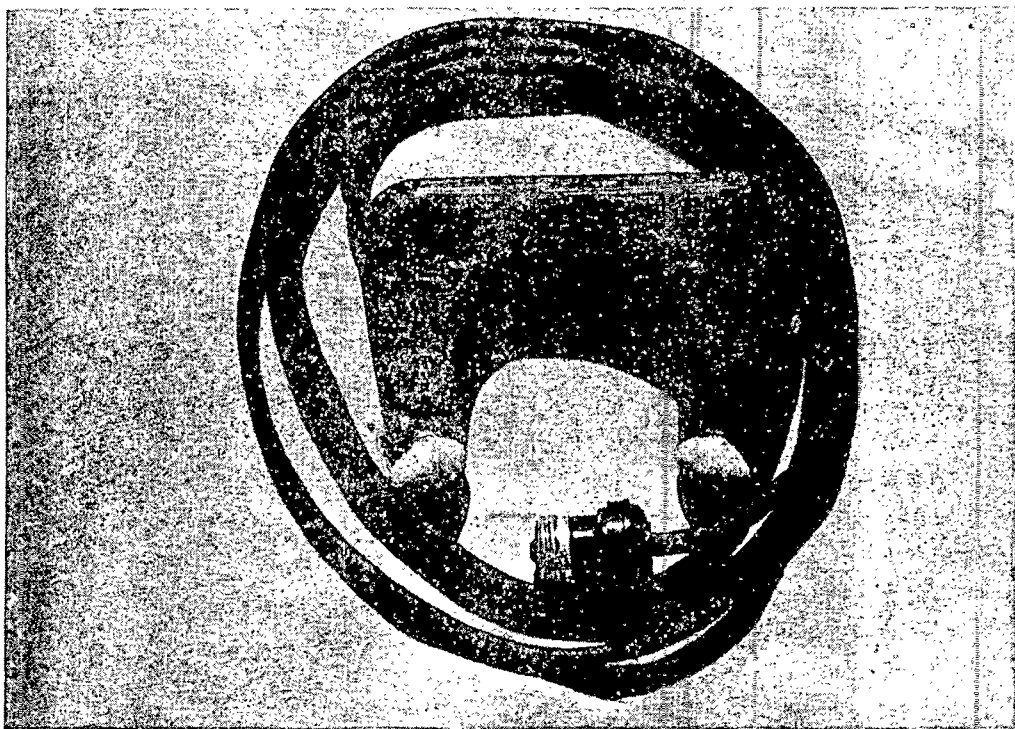


FIG. 1.—Electric shock machine used by Japanese and Korean psychiatrists.

wood handle and attached to a conducting wire in the center of the handle (Fig. 1). This in turn connects with a wire extending to the nearest electric outlet. Alternating current carried through these outlets in Keijo is estimated to be 100 volts, 300 to 500-mille amperes, and the duration of each treatment is timed with a stop-watch or by the operator counting for two or three seconds. A mouth gag was used during treatment. The tonic, clonic and dyspnoeic phases of grand mal seizures customarily seen during electric shock treatment were described.

Complications: The informant stated that in spite of the apparent crudeness of this machine there had been only two known deaths in Korea. These, not his own patients, occurred in 1942 after post-shock status epilepticus. He personally knew of 2 cases in whom convulsive episodes recurred at monthly periods six to twelve months after completion of a course of electric shock therapy and then, just as spontaneously, ceased. He stated that only 2 of his patients had dislocated jaws during treatment and none had fractures. Routine pre- and post-shock spinal X-rays were not taken. In only 1% of cases was artificial respiration necessary.

Results: Hysterics were given petit mal seizures when possible by reducing the time of the treatment and all other types of patients were given grand mal convulsions. Schizophrenics are usually given ten to sixty treatments. He claimed a complete recovery rate in dementia præcox of 25 to 30% and stated that up to 60-70% showed complete or incomplete remissions. Manic-depressives are given three to fifteen treatments and 50% recover; 70% of depressives recovered completely. Excited dementia paralyticas are treated with five to ten electric shocks before starting fever therapy with malaria or typhoid vaccine.

2. Insulin shock therapy: No insulin had been used since 1941 because it was unobtainable. As he preferred electric shock, this loss was not felt too keenly.

3. Metrazol shock therapy: Its use was discontinued five years ago because it too was considered inferior to electro-therapy.

4. Narco-therapy: Although he did not use sleep or narco-therapy here in Keijo, he knew of its use in Japan. The drug, sul-

fonal was used there to produce sleep for five- to seven-day periods. Narco synthesis, as used by the United States Army Medical Corps, was new to him.

5. Hypnosis: This psychiatrist had no personal experience with classical hypnosis and stated it was seldom used in the Japanese Army.

6. Hydrotherapy: This well-proved method was rarely used because of the expense in making hot water, and because the number of personnel required was too great to make it worth while.

7. Epileptics were treated with luminal gr. $\frac{1}{2}$ two to three times daily.

RESULTS

Of all the neuropsychiatric patients admitted to this hospital approximately 80% recovered, 15% experienced an incomplete remission and 5% showed no improvement. Those who required more treatment or prolonged hospitalization were evacuated to Japan.

COMMENTS

Although this appraisal of Japanese military psychiatry in Korea is not a complete one, it affords us some definite information on the subject. We can thus compare American and Japanese psychiatric practice and concepts.

It is of interest to learn that Japanese neuropsychiatrists have had to serve almost one year as privates before being commissioned as medical officers and allowed to resume their professional vocation. The cramped quarters and lack of occupational and recreational therapy show that the Japanese have not been greatly impressed by reports indicating the successful use of those therapeutic adjuncts. The absence of paranoids in a group of 6 schizophrenics may allow one to reflect that the individual Japanese may have rarely known the projective mechanisms involved in the development of this psychiatric entity. The absence of forms of psychoneuroses other than hysteria may have some significance.

The use of electric shock three times daily is a rather startling concept. Histologic studies of the cerebral cortex in these human subjects might shed interesting new light

on the pathological changes induced by this treatment. The occurrence in 2 patients of convulsive disorders six to twelve months after completion of a course of electric therapy may be directly attributable to the high rate of daily treatments. This would be considered an unusually rare occurrence in non-epileptic patients treated two to three times per week.

That the economic factor was an important one in deciding treatment was indicated by the reasons given for not using hydrotherapy.

It is of interest to note that in spite of other differences, statistically, the general overall results of treatment seem to be similar to those seen in United States army hospitals.

PREFRONTAL LOBOTOMY

A PRELIMINARY APPRAISAL OF THE BEHAVIORAL RESULTS¹

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Prefrontal lobotomy for relief of some forms of psychopathy has passed its first decade. In 1935 Egas Moniz, a Portuguese neurologist, and Almeida Lima, a surgeon, working in cooperation with Sobral Cid, a psychiatrist, undertook the treatment of psychotic patients by surgical interruption of the frontal association pathways in the brain. They performed their first operation on November 12, 1935. The favorable result, with confirmation, was reported immediately in several brief communications(77, 78, 81). A monograph by Moniz, describing the results of this operation in 20 cases, appeared in June of 1936(79). This monograph attracted the attention of Freeman and Watts(25), who performed the first prefrontal lobotomy in this country about three months later on September 14, 1936. Following their favorable report, the method was soon taken up by others. It is probable that nearly 1,000 such operations, with variations, have been performed in this country during the past decade. More than one hundred references to leucotomy or lobotomy, as the operation is now known, are to be found in the literature (see bibliography).

General Results Reported for Prefrontal Lobotomy.—In a monograph on the subject published in 1942, Freeman and Watts(33) summarized their general results for a group of 80 cases, comprised of various types, as follows:

In our opinion, 63% of the cases have resulted satisfactorily, while in only 14% of the survivors can the results be considered bad, either from the standpoint of a return or persistence of symptoms

or from the standpoint of antisocial behavior that makes the individual a difficult problem in his environment (p. 287).

Ziegler(114), in 1943, surveyed the results to date for 618 lobotomies from one Canadian and from 17 American centers. The results of this survey, without reference to the preoperative psychopathy, are shown in Table I.

TABLE I.
GENERAL RESULTS OF PREFRONTAL
LOBOTOMY (N = 618)
Data Taken From Ziegler(114)

	Cases	Per-centage
Clinical Status		
Recovery	215	34.8
Markedly improved	194	31.4
Slightly improved	109	17.6
Unchanged	62	10.0
Worse	8	1.3
Death (operative)	12	1.9
Death (subsequent to operation including 2 by suicide).....	18	2.9
Occupational Status		
Working part or full-time.....	251	42.7
Discharged but unable to work..	60	10.2
Hospitalized	277	47.1
Unknown	30	...

Examination of these reported results, essentially as classified by Ziegler, reveals an outlook no less optimistic than that of Freeman and Watts. Thus, 66.2% of the cases are reported as showing marked improvement to social recovery; 83.8% slight or better improvement; 10% unchanged; still less favorable results, 6.2%. Unfortunately, aside from their value as vital statistics, it is impossible to assess the validity of these findings. At no point have there been other than superficial attempts made to *standardize* the criteria for the pre-operative and post-operative clinical status of the patients. Not a single patient has been adequately studied. For a moral and social responsibility to do this, there has been

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substituted a phenomenal array of case statistics. Unfortunately, the pyramiding of *unknowns* is scarcely a pathway to knowledge.

This is no less true in those few instances where clinical opinion has been supplemented by psychometric devices (cf. 33, 51, 52, 57, 59, 88, 97, 100). In no instance has the psychological test or battery of tests employed ever been shown to be sensitive for frontal lobe functions. In several instances just the opposite has been true. We may use a particular test as an illustration. Many other tests employed are either standardized in terms of it or are highly correlated with it.

For the Stanford-Binet test, widely used as a measure of *psychometric* intelligence, the range of post-operative I. Q.'s for unilateral and bilateral frontal lobectomies reported in the literature is from 54 to 152 with a mean value of 108. For cases examined pre-operatively as well, an average drop of one point in I. Q. has been found post-operatively, the range being from a loss of 14 points to a gain of 11 points. Since bilateral (and possibly even unilateral) frontal lobectomy represents more extensive ablation of brain tissue than lobotomy, it would appear unlikely that a test known to be insensitive to the former would prove to be sensitive to the latter. It might be commented in this regard that a physicist who purported to measure micro-volts with a volt-meter would scarcely be taken seriously.

PRESENT INVESTIGATION

Biological Intelligence.—Is there a kind of intelligence that is of fundamental importance to the organism but which is different from that reflected by standardized psychometric tests? Commonplace clinical experience, as well as other lines of evidence, suggests that there is. Clinicians are generally familiar with the discrepancy commonly encountered where the measured I. Q. of a patient may be high yet his usable intelligence, *i. e.*, his capacity for adaptive behavior, may be disproportionately low (44). Ackerly (1), and soon after him Brickner (7), were among the first to report examples of this in patients with extensive bilateral lesions of the frontal lobes. Both of these men were reluctant to conclude that the

adaptive capacities of their patients were unimpaired in spite of the fact that the measured I. Q.'s were within normal limits. One technical reason for this clinical paradox is that the I. Q. reflects special abilities of the individual. In trigger situations presented in the psychometric test, these abilities are touched off or tapped sufficiently to yield a spuriously high index of the adaptive capacities of the individual. This phenomenon is equally to be noted in the performances of normal individuals under biological stresses imposed by such agents as drugs, altitude anoxia, and brain concussion (the post-traumatic syndrome).

Psychiatry, and for that matter the whole field of biology, has long felt the need for a conception of intelligence more closely related to the clinically observed capacities of the individual for general adaptive behavior. The need is for a concept understandable in biological terms, in brief, a concept of *biological intelligence*. Several decades ago, Freud proposed such a concept which he termed the ego. He assigned to it the *control of motility* in various spheres of the individual and likened it to "a man on horseback," who controls the superior energies of the horse with his own (38).

The concept of a controlling ego or intelligence has most recently been explicitly set forth in a timely monograph by Alexander and his associates (2). They state:

Every neurosis and every psychosis represents a failure of the ego in performing its function. . . . Psychotherapy . . . aims to restore this ability to the ego by psychological means (2, p. viii).

But while these authors thus designate the ego as the prime target of psychotherapy, they fail to specify its functions in any but the most global of terms. With the target thus undelineated, it perhaps is not surprising that the effective mechanisms in recovery under psychotherapy have remained obscure.

Can biological intelligence, the ego functions of the individual, be measured by objective means? The answer, fortunately, is an affirmative one. Over the past several years, one of us (W.C.H.) has developed an objective scale for this purpose.

Impairment Index.—By detailed study of carefully selected patients with circumscribed brain lesions, it has been possible to develop

a battery of quantitative indicators which is useful in differentiating such cases from normal individuals. One of the ten different indicators in this battery which may serve here as an example, consists of a category or grouping test(43, 44). In this test the subject is required to grasp or comprehend essential similarities or differences in categories of test figures, presented in a multiple-choice situation by means of a special projection apparatus. The instructions for this test are simple and the scoring is completely objective. The nine other tests are similarly objective. Each has similarly been found to differentiate brain injured patients. Accordingly, these ten indicators have been made the basis for an impairment index of biological intelligence as altered by impairment of brain functions. The scale for the impairment index ranges from 0.0 to 1.0. It may be thought of as a statement of probabilities out of ten chances (tests) that the individual in question has performed like patients with known brain damage. Thus, an impairment index of 0.0 for a normal individual, means that on none of the tests were his scores compatible with brain impairment. On the other hand, an index of 1.0 made by an individual means that scores on all ten tests were similar to those made by patients with known brain injury. On this scale, Dr. Ackerly's well-known bilateral frontal lobe case was found to have an impairment index of 0.9, or near maximal impairment of biological intelligence, in contrast with her I. Q. which falls within the limits of the average normal(1). The scale has proved to be useful in localizing tumors in the frontal lobes of the brain when the electroencephalogram, for example, has proved ineffective. It has proved to be reliable in differentiating unilateral and bilateral frontal lobectomies from surgical lesions in other parts of the brain and from normal control individuals. That it performs this task is demonstrated by an exhibit shown at this meeting (W.C.H.) and in publications which are in press(45, 46). The relative sensitivity of the impairment index for frontal lobe injury is indicated by the fact that the average impairment index for unilateral and bilateral frontal lobectomies is about *six* times that for the normal control group and about *three* times that

for non-frontal lobectomies. On a scale of 0.0 to 1.0, the control group and the frontal lobectomies are separated perfectly by an impairment index value of 0.5. No frontal lobectomy has an index less than 0.5.

With a scale calibrated for frontal lobe damage available, and in view of the growing significance of the problem, it seemed desirable to apply the scale in assessing the neuropsychological effects of frontal lobotomy. Accordingly, in this preliminary investigation, this scale, along with a larger battery of behavioral indicators and with psychiatric studies, has been applied in studying 8 cases before and after lobotomy and one case after this operation. Summaries of the medical and social histories for these individuals are given at the end of this paper.

QUANTITATIVE RESULTS

The impairment index scores obtained pre-operatively (gray cross-hatching) and post-operatively (solid black) in these cases are shown as a histogram in Fig. 1.

It may be noted that there is no evidence of a reliable or consistent shift in the impairment index which may be attributed to lobotomy. In only one instance (M.C.) did a shift of more than one point upward on the impairment index scale occur following the operation. The pre-operative index for M.R. is unknown. Each patient was examined not less than 42 nor more than 90 days after the operation. In some instances, the patient has been followed by serial examinations over a period of about three years. Little change in the impairment index has been found. Thus, in contrast with the findings for frontal lobectomies, biological intelligence, as reflected by an impairment index, does not appear to be altered significantly by prefrontal lobotomy. A possible reason for this result lies in the nature of the impairment index. Each point on the scale stands for performance on an indicator which has been found to reflect brain damage in patients with known localized lesion(46). The scale thus reflects probabilities in chances out of ten (points) that the individual subject has performed like individuals with known brain damage. No frontal lobectomy has been found to score below 0.5

on this scale. Examination of the pre-operative index values for these cases suggests that biological intelligence was impaired *prior to operation* and that lobotomy neither relieved this impairment nor consistently produced a greater degree.

The findings point to significant facts concerning localization of function. Prefrontal lobotomy is primarily a sub-cortical operation and, apparently leaves the cytoarchi-

ing) and post-operative (solid black) results are shown as a histogram in Fig. 2.

It may be noted that no consistent picture emerges for this indicator. There is a suggestion of improved personal status following the operation in the performances of R.C., of possible re-alignment or shift in the character of the psychopathy in I.E., M.C., and M.W. and of little or no change in R.G., N.G., A.L., and F.W.

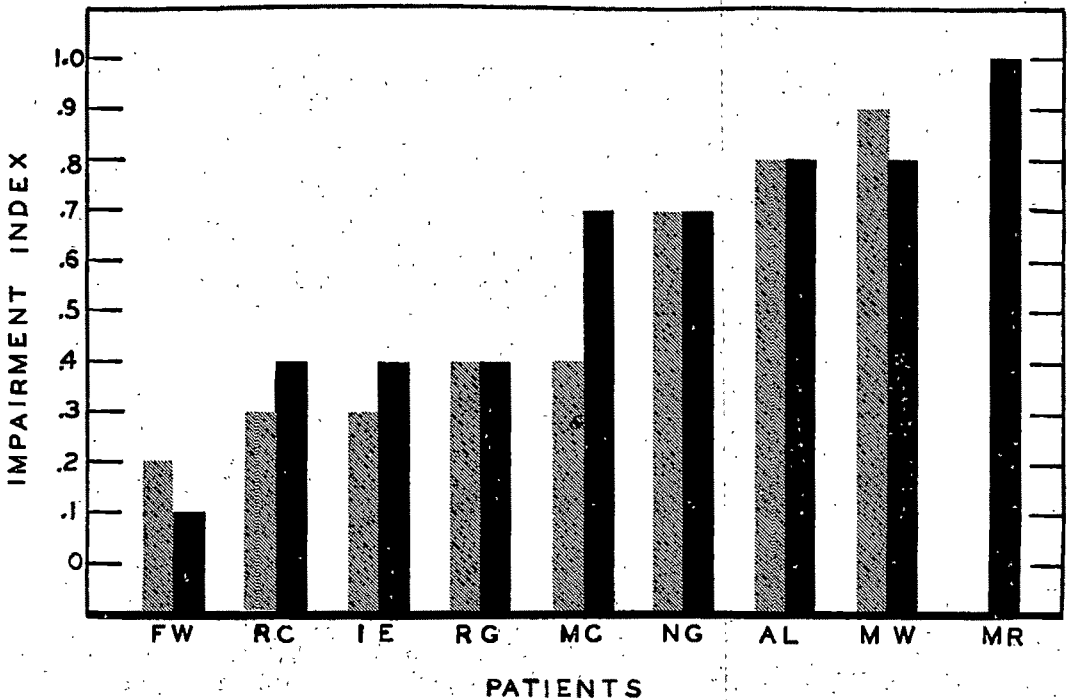


FIG. 1.—Showing pre-operative (gray cross-hatching) and post-operative (solid black) scores on Halstead impairment index in lobotomy patients.

tectural areas of the cortex essentially undisturbed(33). In one of our cases (F.W.), and in three others to a lesser extent, the pre- and post-operative index values are significantly less than those yielded by frontal lobectomy wherein the cortex is removed along with the sub-cortical white matter. This would seem to indicate that the functions reflected in the impairment index are maximally represented or localized in the cortex of the frontal lobes(46).

To supplement the impairment index and the psychiatric interviews, the Minnesota Multiphasic Personality Inventory was employed. The pre-operative (gray cross-hatch-

SUMMARY AND CONCLUSIONS

In a preliminary investigation, an impairment index scale developed by one of us (W.C.H.) for reflecting impairment of biological intelligence has been applied to 8 carefully selected individuals before and after prefrontal lobotomy and to another individual following lobotomy. Several of these cases were found to exhibit an impairment of biological intelligence prior to lobotomy. This operation did not consistently alter the degree of impairment manifested quantitatively in contrast with high impairment scores obtained for frontal lobectomies. This would seem to point to the cortex of the

frontal lobes as the region of the brain in which the functions reflected by the impairment index are maximally represented or localized.

It is concluded that:

1. Impaired biological intelligence, as encountered in some forms of psychopathy, is not relieved by the operation known as prefrontal lobotomy.

2. Lobotomy may not increase the degree of impairment of *this* function.

illness readily, complained of numerous body aches and pains, and stated that she felt she could never get well because she had seen a paternal aunt in the state hospital many years before. Physical examination and laboratory studies revealed a few positive findings, none of which was of serious import.

Bilateral prefrontal lobotomy was performed February 4, 1944 by Dr. Paul C. Bucy. Immediately following the operation, she seemed somewhat passive, rather indifferent, was incontinent of urine, and no longer complained of her obsessive fears or of bodily aches and pains. This clinical picture persisted until about one month after operation, when following successful treatment of an abscess

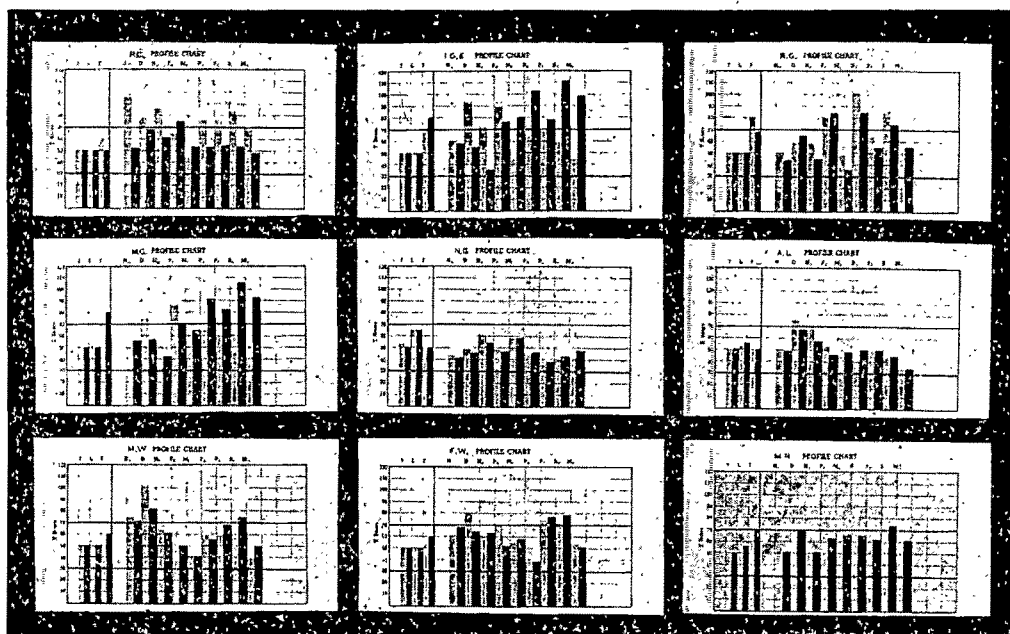


FIG. 2.—Showing pre-operative (gray) and post-operative (black) scores on the Minnesota Multiphasic Personality Inventory in lobotomy patients. Scores above 70 regarded as abnormal.

3. Little is known concerning the behavioral effects of prefrontal lobotomy.

MEDICAL HISTORIES

R. C., a 33-year-old, married woman was admitted to the psychiatric division of the Illinois Neuropsychiatric Institute (INI) November 3, 1943, complaining that for six months she had had obsessive thoughts and fears of hitting someone, hurting her daughter, killing her husband, committing suicide, and of screaming. In 1941, she had received electroshock and insulin treatments with apparent recovery from similar complaints. At that time, she attributed her illness to two miscarriages between the births of her daughters in 1938 and 1941 and to her husband's heavy drinking and threatening behavior when drunk. On admission to INI, she was quiet, friendly and cooperative, discussed her

in the upper jaw following the extraction of an abscessed tooth and treatment with sulfathiazole, she became more alert and active, said she never felt so well and that though she still had thoughts of striking people, especially after menstrual periods, these were not as strong or frequent as before. She was discharged March 30, 1944.

When she was again seen on September 27, 1945, she reported that she had been well following her discharge until two months previously when, after birth of a baby boy, her obsessive thoughts of hitting someone returned at times. She also had developed fatigue which she attributed to work involved in caring for a new baby, but said she had learned to express her resentments more readily and without guilt, no longer was so concerned about her physical state, but that she still cleaned house more often than was needed, and still had to do things in a hurry. Her husband confirmed these

statements. When last seen, January 29, 1946, she complained of headaches, cardiac palpitation, dizziness, nightmares, return of her obsessive thoughts of harming people, and quarrels with her husband.

Diagnostic impression: obsessive-compulsive state with depressive and hypochondriacal trends.

I. E. G., a 40-year-old, single woman was admitted to the neurological division of INI March 17, 1944 by referral from a state hospital where she had been voluntarily committed since 1941. At 20 years of age she was ill for several months during which time she manifested a compulsion to wash, was unable to concentrate, and cried a great deal. She was able to return to college and graduated at the age of 22. Following her father's death in 1932, she sought psychotherapy but developed more symptoms such as eating one meal daily at midnight, sleeping most of the day, and refusing to touch money and to sleep on sheets. From 1938 on, she had not worked. During 1938 she spent several weeks at a private sanitarium. For three years before admission to a state hospital, she lived alone in a big house and was depressed and spent most of her time washing. While in the state hospital, her washing and bathing compulsions occupied more and more of her waking hours. She developed "spastic colitis," refused to eat hospital food, resisted attempts to leave the hospital, and showed increasing tension and anxiety. In December, 1943 a course of electroshock treatments produced temporary relief from anxiety, and the colitis, but the washing compulsion continued. At the time of her admission to INI her physical state was good except for undernourishment and a mild degree of edema of her ankles, presumably due to nutritional deficiency as a consequence of her self-imposed "colitis diet."

Bilateral prefrontal lobotomy was performed May 4, 1944 by Dr. Paul C. Bucy. Two weeks later she was transferred to the psychiatric division of INI. At that time she suffered from urinary incontinence, spent many hours daily in the bathroom bathing and washing herself, was slow in speech and action, and quite passive in her contacts with others. One month after lobotomy the anxiety and tension were less, and the washing compulsions not so pronounced although she insisted she still felt dirty. During the latter part of June, 1944, she, for the first time, was willing to consider not returning to the state hospital, spent much less time in the bathroom, was no longer incontinent. This improvement continued. She began to take considerable care and pride in her appearance, left the hospital on visits with relatives, and felt well enough to look for a job outside the hospital. Just before her discharge, September 10, 1944, she had secured a job to which she had difficulty in adjustment. She worked for six months, from December, 1944 to May, 1945, handling small instruments on an assembly line in a war plant at \$60 a week. From June to October, 1945, she worked as a machine operator at another plant when she was asked to leave and advised to seek medical care since she had been staying away 6-7 days a month during her menstrual periods. When she was seen, October 19, 1945, she reported the

above and in addition said that following the receipt of some insurance money after her mother's death in March, 1945, she married a man she had known as a fellow patient in a state hospital, but that her married life had not been happy and that she had separated from her husband, October 14, 1945. However, she reported that she was much better than before the lobotomy and before her discharge from the hospital, that she had no urinary incontinence, and that she could bathe in half an hour; but that she had not experienced orgasm in sexual relations with her husband. When last seen, January 16, 1946, no essential difference was recorded in her behavior.

Diagnostic impression: obsessive-compulsive state.

R. G., a 29-year-old married woman was first seen in the psychiatric out-patient clinic, October 27, 1944 complaining of having to wash her hands and other things over and over, having to go back several times to see if she had turned off water, gas and lights, and felt unsure of herself. She dated the onset of these complaints to November, 1943 shortly after delivery. They had increased to the point where she was unable to care for her house or her child and had led to difficulties with her husband. She was admitted to the psychiatric division of INI November 13, 1944 for further study and treatment. Physical examination and laboratory studies revealed no positive findings of serious import for her present illness. Little or no improvement was noted in her symptoms during this hospitalization which lasted until December 24, 1944. She was readmitted January 22, 1945.

On March 6, 1945 a bilateral prefrontal lobotomy was performed by Dr. Paul C. Bucy. In the week following operation, she was irritable, at times profane, demanded much attention, laughed overmuch and in a silly fashion, but did not complain about her compulsions and fears and did not manifest the over-frequent handwashing. Thereafter for the next few weeks she showed lack of initiative, disinterest in activities or in other patients, had no confidence in herself, and insisted that she was just the same although her compulsive behavior regarding bathing and toilet habits became much less marked. On trial visits at home and after her discharge, April 12, 1945, she was unable to get herself started at housework or cooking and was reported by her husband to be irritable. Up to July, 1945, she apparently improved and became able to look after her house and her child although she had some difficulty in resisting impulses to wash her hands and to urinate frequently and was unable to lock the door without obsessive doubts. She also got along better with her husband and was pleased with her improvement. When last seen, January 10, 1945, her condition was essentially unchanged from that noted in July, 1945.

Diagnostic impression: obsessive-compulsive state.

M. C., a 60-year-old divorced woman was first seen in the psychiatric out-patient clinic, October 10, 1940 complaining of fears of dirt, having to wash her hands repeatedly and frequent crying spells. Apparently she developed fears of dust

shortly after her marriage 35 years before and became so obsessive in her housecleaning that it occasioned quarrels with her husband. She finally left him in 1917 when her youngest child was 4 years old, but did not secure a divorce until 1941. She lived at her parents' home and worked part time for many years thereafter until her mother died in 1936. Following the birth of her third child in 1913, she suffered a laceration of the perineum. A recto-vaginal fistula developed following a pelvic operation of some kind and several unsuccessful attempts were made for repair of this fistula. After the fifth attempt, she developed incontinence of feces. For the 22 years following, she felt that her hands were dirty and her body filthy with feces because she could not control her bowels, and therefore she washed her hands frequently. She spent three months in a state hospital during 1940. Her fears of soiling and excessive handwashing occurred after another operation for repair of fistula in February, 1941. A still further exacerbation of symptoms occurred in the fall of 1942 in connection with a property settlement in connection with her divorce; and in the fall of 1943 when she sustained a fracture of the right lower leg and spent 4 months in the hospital. She was admitted to the psychiatric division of INI, January 18, 1945 at which time her obsessive-compulsive symptoms were very much in evidence. Physical and laboratory studies revealed the following positive findings: blood pressure 178/110; markedly relaxed rectal sphincter, but no evidence of recto-vaginal fistula; ventral abdominal hernia; decreased hearing, particularly in the right side; arcus senilis; systolic murmur at apex and aortic areas.

Bilateral prefrontal lobotomy was performed March 6, 1945 by Dr. Paul C. Bucy. During the week following the operation she was slightly disoriented as to time and place, was quiet and relaxed, made no complaints, said she felt clean, and expressed no desire to scrub her hands. Two weeks after the operation, she was alert, well oriented, pleasant, was interested in things, had no anxiety about soiling herself, and did not seem to be compelled to wash her hands. One month after prefrontal lobotomy, she developed pain and tenderness in her ventral hernia. Herniorrhaphy was performed under spinal anesthesia with an uneventful post-operative course. At the time of her discharge, May 10, 1945, her hands and arms had lost their reddened appearance. She obtained a position as assistant cook in an orphanage at a small salary with maintenance and when last seen, October 6, 1945 had held this job for four months. At that time she was no longer worried about her relaxed rectal sphincter, felt that the prefrontal lobotomy had done a lot of good but was very vague about the diminution in her handwashing compulsion.

Diagnostic impression: obsessive-compulsive state.

N. G., a 51-year-old single woman was first seen in the otolaryngology out-patient clinic in October, 1941, complaining of a pain in her throat which she said was due to swallowing a fishbone. No foreign body was found on examination, and she was referred to the department of surgery for repair of

bilateral inguinal herniae. Operation was performed November 10, 1941, followed by an uneventful post-operative course. On April 20, 1943 she was seen in the psychiatric out-patient clinic with complaints of "nervousness," weeping, fears of germs, of harming others, and of being alone. The fears had begun 10 years previously and were accompanied by excessive handwashing, had become accentuated after herniorrhaphy in 1941, and did not yield to treatment with barbiturates, bromides, benzedrine, and 12 electroshocks. She was admitted to the psychiatric division of INI March 8, 1944 at which time physical examination and laboratory studies revealed essentially normal findings except for a few minor deviations and abnormally fast waves on electroencephalogram, and an I.Q. of 81 with a mental age of 11 years, 10 months, on the Cttis Intermediate Test.

Bilateral prefrontal lobotomy was performed May 5, 1944, by Dr. Paul C. Bucy, but section was not made in the left inferior quadrant. In the early post-operative period, she said she no longer feared germs but complained of being worried, expressed some guilt feelings although she seemed less tense and anxious than before and manifested no ritualistic behavior. After discharge June 27, 1944 she was admitted as a voluntary patient to a state hospital in September, 1944, but remained there for 3 days only. When seen in November, 1945, virtually all her symptoms had returned to such a degree that she was unable to leave her home. Following the death of her mother in January, 1946, it was difficult to care for her at home because of her bizarre behavior, uncooperativeness and suicidal threats. She was taken to Cook County Psychopathic Hospital where she was found to be without psychosis and was released to her family. She refused to consider voluntary commitment to a state hospital but returned to the psychiatric out-patient clinic where, when she was last seen in March, 1946, the impression was that her condition remained essentially unchanged.

Diagnostic impression: obsessive-compulsive state.

A. L., a 38-year-old, married man entered the psychiatric division of INI March 23, 1944. His illness was said to date back to October, 1942 when he had a spontaneous subarachnoid hemorrhage following which he experienced various sensations in his head and scalp which he interpreted as the "brain being stuck to something" and as "something moving in the brain." A neurological examination in October, 1943 revealed only the following positive findings: slight flattening of the left side of the face and a slight hesitation in distinguishing between his right and left sides. These complaints were considered to be psychoneurotic. He was referred to a psychiatrist for psychotherapy. It was the psychiatrist's opinion that this was not the treatment of choice in view of the defect from the actual brain damage he had suffered for which he was unable to compensate in everyday performance due to his limited capacities in general endowment and personality makeup. Electroshock or prefrontal lobotomy was contemplated for further treatment. Before arrangements for these could be made, he

became acutely psychotic, heard voices telling him to hurt his baby, kill his wife, kill himself; ate little, slept poorly and threatened suicide. He voluntarily entered Cook County Psychopathic Hospital for help in controlling his fears and anxieties. On admission to INI his mental status was much improved and he interpreted the voices he had heard as "my thoughts becoming audible to me." Physical examination and laboratory studies were essentially negative except for findings noted previously.

Bilateral prefrontal lobotomy was performed May 2, 1944 by Dr. Paul C. Bucy. Immediately following operation he was confused as to time, misidentified fellow patients and an intern, and seemed anxious about what would happen to him. A little later he seemed to be less tense and even stated that the movements in his head had lessened and that his queer ideas were gone. From this time on until his discharge, June 17, 1944, he was somewhat uninhibited in a flirtatious manner, more happy and cheerful, no longer obsessed by fears of harming his child, was irritable about being kept in the hospital, and wanted to return to his job. He was followed in the psychiatric out-patient clinic thereafter until October 12, 1945. His course was a variable one. At first he seemed happier in general; then he became fatigued and slept poorly, followed by a return of the obsessive thinking about his head sensations, and later still became depressed and discouraged, was said to be inconsiderate of his wife and children, said that things were changing, and complained not only of sensations in his head but also in his face and back. He seemed preoccupied with his bodily functioning and seemed to get confused and excited when asked questions. Neurological examination in September, 1945, was essentially negative.

Diagnostic impression: psychotic episode due to disturbance of circulation (subarachnoid hemorrhage) with an obsessive-compulsive state.

M. W., a 56-year-old unmarried woman was admitted to the neurosurgical service of the University of Chicago Clinics July 24, 1943 complaining that during the preceding two years she had had a dull, aching pain in her neck and left shoulder and in a phantom of the left arm. The arm had been amputated in June, 1941, but the pain persisted in the phantom limb and two chordotomies had given only temporary relief. She had had a radical left mastectomy for a malignant growth 14 years previously and 7 years later, a non-painful, malignant ulcer was removed from the left axilla. Following the second chordotomy, she had visual and auditory hallucinations for a period of 3 weeks. She had sudden, periodic attacks of severe pain in the neck and phantom left arm, radiating to the left leg and foot, lasting for 10 minutes to an hour or more and unrelieved by any medication. Physical examination and laboratory findings were otherwise essentially negative. The intelligence quotient on the Stanford-Binet Form L was 130.

Bilateral prefrontal lobotomy was performed October 12, 1943 by Dr. A. Earl Walker. At first she had seemed to be somewhat improved but by the end of a week, the attacks of pain were as

severe as ever. This condition persisted following discharge from the hospital December 19, 1943 until her death at home in January, 1945. Cause of death was attributed by the family physician to a recurrence of the malignancy in the "mediastinal region." No autopsy was performed.

Diagnostic impression: intractable pain with phantom limb.

F. W., a 27-year-old, single man was first seen in the psychiatric out-patient clinic October 27, 1939, when he complained of feelings of inadequacy, fear of homosexuality, depression, and loss of all religious inclinations. He dated the onset of his illness to the age of 15 years when he thought he had acquired syphilis. At that time he was relieved by reassurance from a physician about masturbation and remained relatively well until one year before this interview. Then he developed his present complaints following the commitment of his immediately older brother to a state hospital. He was seen in 3 interviews only and did not return to the clinic until July, 1940, at which time voluntary commitment to a state hospital was recommended. He entered the state hospital on two occasions from August 13 to October 4, 1940, and October 18 to December 8, 1940, but showed no improvement. Thereafter he continued to live at home and tried several occupations but was unable to hold a job. He was admitted to the psychiatric division of INI August 10, 1943 with essentially the same complaints as in October, 1939. Physical examination and laboratory studies revealed as positive findings a sinus arrhythmia and a mitral systolic murmur.

Bilateral prefrontal lobotomy was performed September 27, 1944 by Dr. Percival Bailey. Immediately following operation he seemed tense and self-critical. He remained somewhat somnolent for some days after this, but his tension was less and he admitted that he was feeling much happier. Ten days after lobotomy, he said he felt perfectly happy for the first time since he could remember, but by October 13, 1943, he began to complain of tension again, said he could not make up his mind about anything although he admitted he had less fear of homosexuality than he had before. Upon his discharge from the hospital November 17, 1943, he was apprehensive about what work he could perform. When he was next seen October 26, 1945, he reported that he had 19 or 20 jobs since his discharge, but that he quit most of them because he felt inadequate and inferior. For one period he attended night high school for one term, but although he made good marks, he did not continue his studies. One time he managed to save \$100 but was disappointed that he did not reach his goal of \$200. He was depressed at this interview and needed much encouragement, but did admit that he was much better than he was before lobotomy. When last seen, April 30, 1946, he complained of becoming more irritable and restless and of obsessive thoughts of suicide and of killing his mother, but seemed to feel much relieved after discussing his feelings.

Diagnostic impression: mixed psychoneurosis with anxiety, tension, inadequacy feelings, obsessive fears and hypochondriacal trends.

M. R., a 36-year-old, married man was admitted to the psychiatric division of INI October 16, 1942. He stated that at the age of 17 years, he was struck a severe blow on the jaw in boxing, that he thereafter suffered pain in the left side of his face for which he received much treatment, including surgical procedures on the left maxillary antrum. He had worried constantly about this matter. At 22 he became depressed and made a suicidal attempt. At 23 he had a psychotic episode and spent some time in a sanitarium. He was reported to have been "overly clean," to have washed his hands as often as 40 times daily, and to have been obsessively preoccupied about his physical state. During 1939 and 1940 he expressed feelings of futility, hopelessness and disinterest in his work as an artist and had many somatic complaints. In 1941-42 he received several courses of electroshock therapy and a course of insulin shock therapy with only temporary improvement. Obsessive fears of killing others or himself developed with marked hypochondriacal trends. In September, 1942 he made a suicidal attempt with phenobarbital. It was following his recovery from this that he was admitted to INI. In November, 1942 he went on a week-end pass and made an unsuccessful homicidal attack on a friend and then tried to kill himself.

Bilateral prefrontal lobotomy was performed November 12, 1942 by Dr. Percival Bailey. He was stuporous for 48 hours following operation, then became generally happy and pleasant, said that things didn't come into his mind as much as before, and manifested a somewhat silly grin at inappropriate times. Two weeks after the operation, his affective responses were more appropriate, but he was easily distracted by slight stimuli and was unable to focus attention readily on one subject. Thereafter, for the next two weeks, he exhibited some euphoria, punned a great deal and grinned readily. This period was followed by an exhibition of resentment towards attendants and other patients, refusal to participate in ward activities, and masturbation in the presence of others. Six weeks after the operation he controlled his resentment and sexual urges better, but continued to be critical of others and to reprimand them frequently for misconduct. In January, 1943, he seemed to be more aware of his environment, discussed plans for the future but appeared to have some slight impairment for recent memory, was evasive in answers to questions, and still insisted that all his difficulties could have been avoided had he not received the blow on his jaw at the age of 17 years. He was discharged January 20, 1943. He was seen twice weekly in the psychiatric out-patient clinic for the three months following discharge. He secured a job in a war plant in March, 1943 and when last seen, October 12, 1945, reported that he had worked for two years at different war plants, had held 3 jobs for 9, 10 and 3 months respectively, had earned as much as \$100 weekly, found none of his jobs difficult, had lost some of them on the matter of principle, and that he had recently quit to resume his work as an artist. At this same time he was no longer concerned about the pain in his face; people no longer

irritated him; he had lost his anxiety; and his relations with his wife were good. On the whole, he was considerably improved as compared with his condition prior to and immediately following the lobotomy.

Diagnostic impression: psychotic episodes with schizophrenic and depressive features; obsessive-compulsive and hypochondriacal state.

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⁴ We are indebted to Mr. Ralph Reitan for assistance in compiling the bibliography.

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TRANSITORY SCHIZOPHRENIAS PRODUCED BY BROMIDE INTOXICATION

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INTRODUCTION

Bromide intoxication produces a variety of psychiatric syndromes, two of which have been known for years: (1) the so-called *simple bromide intoxication*, marked by dullness and mental sluggishness, with good orientation and without delusions or hallucinations; and (2) *delirium*, marked by disorientation, thinking disturbances, mood disturbances (usually fear), delusions, hallucinations and restlessness. These two syndromes are no longer regarded as curiosities. A third syndrome, *hallucinoses*, is less well known; it is marked by hallucinations, but in a setting of clearness, with little or no disorientation (bromide hallucinoses being to bromide delirium what alcoholic hallucinoses is to alcoholic delirium).

A fourth syndrome has occurred in a study of a large series of bromide psychoses, and the object of this paper is to describe it. It is remarkable for its resemblance to schizophrenia, a resemblance so close that physicians who are not "bromide conscious" are apt to diagnose it as "ordinary" schizophrenia. Indeed it differs from "ordinary" schizophrenia only in that it supervenes during bromide intoxication and clears up when the intoxication subsides or fairly soon after. The condition, which hereafter for the sake of brevity will be referred to as bromide schizophrenia, differs from bromide *delirium* in two chief respects. (1) In bromide schizophrenia (provided there is no delirious admixture) orientation is intact. (2) In bromide schizophrenia the patient's delusions and hallucinations possess a characteristic schizophrenic stamp not found in the deliria of non-schizoid persons. These and other differences will be discussed in detail below.

Thirteen cases form the basis of this report. They are summarized in Table II.

DESCRIPTION OF BROMIDE SCHIZOPHRENIA

The patient (all thirteen were women) usually possesses a schizoid personality, with

evidence of emotional immaturity. The physique is usually of the asthenic or dysplastic, but sometimes of the pyknic type. Fatigue, nervous strain and similar symptoms cause her to take bromide, and as intoxication develops she loses energy and becomes sluggish and forgetful. Presently she begins to imagine things and in a few weeks reaches the hospital.

Mental examination shows a listless woman who is reticent, suspicious and inaccessible. One patient asked, "Am I going to get a square deal?" and insisted she would not talk unless her lawyer was present. Hallucinations and delusions dominate the picture.

The *hallucinations* may be in any or in all spheres. Voices taunt the patient, call her vile names and proclaim her secrets. One voice said, "Susie C. (patient) ain't nothing but a streetwalker. She's had two or three husbands and I don't know how many babies. She ain't married to Henry C. (husband). She got to stay in prison the rest of her life. *Kill her! Kill her!*" Several patients heard people talking about them over the radio. In one case a voice seemed to come from below and the patient concluded that a radio announcer "has thrown his voice into the cellar." She believed there was a telephone concealed in the floor. People can read the patient's mind, and she hears her thoughts echoed. One patient said that when she read her Bible, other women on the ward opened their Bibles to the same verse and read aloud the verse she was reading to herself. Patients see snakes, roaches, bedbugs and lions, and one said that during the night she had seen strange men, one of them a Japanese, in her room. Angels convey messages by means of words printed on the wall. One patient saw particles of "a poison" floating in the air; the air was filled with "white chalk dust"; she smelled ether and other noxious substances and tasted poison in her food and drinking water. A patient with a feeling of guilt perceived an indefinable "odor of death"

and a "taste of death." In the spheres of the cutaneous and somatic senses, patients are bitten by animals and pricked by enemies using fine needles. One patient said that people in the hall threw tiny darts into her room, darts so small as to be invisible but she could "feel them go right into my flesh." Another said that Negroes were burning her alive. Another, that bullets were flying all around, and that two were actually in her head at the moment. Another, that she had been crucified and the nails were still in her body; her heart was (literally) bleeding, and blood had soaked through mattress and floor and was being collected by her enemies in the cellar. A patient beginning to have insight recalled that earlier in her psychosis "I imagined my husband had fixed the dog up—bred it with another dog for to put the pup inside of me. The pup seemed to be up in my womb, and I tried to get it out, and I just screamed and cried because I thought I was going to give birth to an animal. I also thought I was going to give birth to a big bug." Another patient said there was a copperhead snake in her abdomen. Another, after the visit of the ward physician, asked the nurse, "Is he going to put a stone baby into me? . . . Is he going to turn me into a dog?"

Delusions of persecution and of reference are abundant. Enemies are planning to kill the patient and have cast a spell on her. One said that other women on the ward made "funny maneuvers with their fingers" (wriggling movements) in order to pass the word along that she had lice in her hair. They snubbed her because she was poor; "they don't want to sit down beside me—when I sit down, they get up."

Ideas of electricity were present in no less than 6 cases. A patient said that during a recent X-ray examination her body had been "filled with electricity." The bed and other objects in her room were charged with electricity; her enemies "have the electricity turned on me all the time—I can feel the vibration." There was an "electric machine" on the floor above, where a woman undertaker was waiting for her body. An electric switch was concealed near her bed, and led to a nearby railroad track; the circuit was so arranged that the passage of a train would close it and electrocute her.

In view of the foregoing description, which

looks like a page torn out of Kraepelin's book on dementia præcox, the average case is (from psychiatric examination alone) hardly to be distinguished from an "ordinary" schizophrenia. Examination of the serum, however, discloses a bromide intoxication, and soon after discontinuance of the drug (in most cases, three to five weeks) the patient recovers completely. These circumstances, coupled with the fact that the psychosis started after the patient had taken bromide to the point of intoxication, establish the diagnosis of bromide schizophrenia.

The cutaneous and neurological signs of bromide intoxication may be present. These need no discussion.

Orientation remains to be discussed, having been purposely left for the last. The 13 cases showed all gradations from cases with little or no disorientation (Cases 3, 6, 10 and 13) to cases with disorientation in the three spheres of time, place and person (Cases 2 and 4). In the remaining 7 cases disorientation was incomplete, being either confined to one sphere—invariably the sphere of time—or else most marked in that sphere. This disorientation is not to be regarded as part of the schizophrenic picture; its presence means that the bromide *has produced a delirium in addition to the schizophrenia*. Elsewhere (3) I have shown that severe delirium and mild delirium differ in that disorientation exists in all three spheres in the one, while in the other it is confined to, or is most marked in, the sphere of time. The reason for this is that orientation for time is a more complex function, hence more vulnerable, than orientation for place and person. When, therefore, a patient with bromide schizophrenia continues to take the drug till delirium supervenes, she will—as long as the delirium is in its incipency—be disoriented only or chiefly for time. It was at this stage that 7 of the 13 patients came to the hospital. Two others came after the delirium had grown severe enough to be manifested by disorientation in all spheres. Four, on the other hand, came before delirium had begun or when it was just starting.

It has already been said that bromide schizophrenia looks like ordinary schizophrenia. This refers of course only to the schizophrenic component of the clinical pic-

ture, and not to any delirious admixture that might be present. Even when there is a delirious admixture, however, one may still say that bromide schizophrenia looks like ordinary schizophrenia: the patient in such a case looks like an ordinary schizophrenic who has taken enough bromide to become delirious.

Besides precipitating a transitory schizophrenia, can bromide intoxication precipitate a permanent schizophrenia? It probably can, though the answer cannot be given with certainty. One of the diagnostic features of bromide schizophrenia is its transiency. When a schizophrenia, having apparently supervened during bromide medication, fails to clear up under treatment, one cannot easily dismiss the possibility that the patient had in reality already started to become schizophrenic, and that the drug either played no rôle at all or else merely greased the skids a little. But if bromide intoxication can precipitate a transitory schizophrenia in a person moderately predisposed, why could it not precipitate a permanent psychosis in one gravely predisposed? That is just what other intoxications sometimes do.

DIFFERENCES BETWEEN BROMIDE SCHIZOPHRENIA ON THE ONE HAND AND BROMIDE DELIRIUM AND HALLUCINOSIS ON THE OTHER

In delirium, by definition, there is disorientation. In schizophrenia (provided there is no delirious admixture) orientation is intact. This, however, is not the only difference: there are four others.

1. Bromide schizophrenia occurs by preference in persons of strongly schizoid make-up, whereas delirium shows no such preference.

2. Schizophrenia and delirium stand at opposite poles in respect to disturbance of rapport. In the former, rapport is faulty, the patient being preoccupied, aloof, reticent and irritable, just as in any ordinary schizophrenia. By contrast, in bromide delirium rapport is conspicuously good: however befuddled and disoriented the patient may be, he is friendly, polite and willing to talk.

3. The content of bromide schizophrenia, like that of other schizophrenias and unlike that of delirium, has a pronounced flavor of

the bizarre: ideas of influence and mind-reading, ideas of electricity and somatic distortions are prominent, as exemplified in the description given in the previous section.

4. The fourth—and most remarkable—difference merits discussion at some length. Though hallucinations and delusions occur both in schizophrenia and in delirium, there is this striking difference: in schizophrenia they reveal a quality of self-reference vastly exaggerated above that seen in delirium. In schizophrenia the patient's imaginations have a highly personal stamp. Voices reveal a disconcerting familiarity with her past and betray her innermost secrets; she alone is singled out for abuse; her enemies point scornfully at her alone; self-consciousness is at maximum pitch, the patient occupying the center of the stage, in full spotlight. By contrast, in delirium this intimate personal stamp is lacking. The imaginary disasters which have befallen or are about to befall the delirious patient are impersonal in the sense that they throw no spotlight on his innermost preoccupations. They are disasters which involve no shame. They affect others beside the patient, as in the idea that the house is on fire, endangering others as much as himself. They may even affect others exclusively, as in the idea that a dear one has been killed in an accident. Compare (a) the delirious woman's idea that her daughter has just been killed in an accident, and (b) the bromide schizophrenic woman's idea that people are "maneuvering" (wriggling) their fingers to show that they know she has lice in her hair. The former is a disaster but not a taunt; there is nothing shameful about it; it is the sort of thing one can talk about without embarrassment; it is not an idea of reference. The latter, on the other hand, is an idea of reference of the most painfully embarrassing kind. Both imaginations are, to be sure, complex-determined. The delirious woman doubtless had subconscious aggressive impulses toward her daughter. But these complexes are not as "intimate" as are those betrayed by the second woman's imagination.

To exemplify the contrast further, compare (a) the delirious woman who hears voices saying that her house is on fire, and (b) the bromide schizophrenic woman who

heard voices which said, "You're a devil in sheep's clothing. We're going to put you in the bughouse if it's the last thing we do." The hallucination in (b) is vastly more "personal" than in (a). To be sure, it is personal in (a) too, for the loss of one's home is a personal disaster of the first magnitude. But in (a) there is none of the heightened self-reference so evident in (b).

As a corollary to this distinction, there is a striking difference in the degree to which the patient imputes his troubles to the evil-doing of others. The delirious patient attributes his troubles not so much to persecution by spiteful enemies as to impersonal causes—a fire, an accident, etc. The schizophrenic believes himself the victim of persecution; the delirious man, the victim of hard luck. Moreover, when the delirious man *does* imagine that enemies have a hand in his trouble, they are apt to be enemies not just of himself alone, but enemies of *some group to which he belongs*. The delirious man is not a puny solitary individual singled out for abuse; he is a member of a group facing a common enemy.

Between bromide *hallucinoses* and bromide schizophrenia there is the same distinction in respect to degree of self-reference as between delirium and schizophrenia.

Four cases of delirium and one of hallucinosis will now be cited briefly in further illustration of this distinction.

(a) A veteran of World War I, in a fever delirium, fought imaginary German soldiers who he thought were trying to break into the building. Here one sees how the delirious patient who is not schizophrenic envisages a common enemy, rather than an enemy of himself alone.

(b) A newspaper reporter in a small steel town, during an alcoholic delirium, mistook me for his managing editor. There had been much labor trouble in the town, with strikes and riots. In his delirium he said to me in a tone of concern, "Now, Al, about that fight last night—it's really important! I'm telling you, it's a good story but it's one that involves *us*." He imagined that dynamite had been used by the warring factions and that he and I were in a dilemma: if we reported the riot fully, we would be treading on many toes. He had no real ideas of per-

secution. When, for example, he suspected that unfriendly people were watching him, he thought they were watching him not as a man they hated for himself but as a member of the opposing faction in a labor war.

(c) A woman in a drug delirium was fearful and uneasy, but, from start to end of her psychosis, she displayed not so much as a single idea of persecution. Invariably she explained her uneasiness by saying she had just received word (auditory hallucination) of some disaster that had befallen her family: her father had died, her husband had been hurt in an automobile wreck, her child had been kidnapped (by someone who wanted ransom and nothing else), and her aunt's house had caught fire.

(d) A woman who had recovered from a bromide delirium recalled the following scene from her psychosis. While lying in bed watching people passing by in the hospital corridor, she thought she saw a man approach a woman and demand money; the woman asserted she had no money, whereupon he drew a gun and assumed a menacing attitude; the woman gave in and said, "All right, I'll get you some money"; she left and soon returned with a revolver which she fired many times at the retreating man. In contrast to the great self-awareness of the schizophrenic, the incident experienced by this delirious woman shows an utter lack of self-awareness, the patient being merely a passive spectator of a horrible scene which did not concern her, save insofar as she might have been menaced by a stray bullet.

(e) Similar to the foregoing is the case of a non-schizophrenic woman in a bromide hallucinosis who said she saw people tossing babies out the window. The babies were not hers, and the incident did not concern her except as it stirred her to pity and horror. This is a clear example of freedom from self-reference.

Thus it is evident that the non-schizophrenic patient with delirium or hallucinosis shows no great increase in self-consciousness. In his imaginations he plays, for the most part, the rôle of a mere onlooker. Unlike the schizophrenic, he does not feel he is in the limelight. If the schizophrenic is like an actor on a stage in the full spotlight of public scrutiny, the delirious non-schizophrenic is

like a member of the audience in a darkened theater—an anonymous member of the crowd, a witness to a grim tragedy, but himself unseen and unnoticed. This distinction is of the utmost importance; it lies at the root of the difference in the way the two groups of patients think and feel.

* * * *

The foregoing distinctions between schizophrenia and delirium having been presented, it now remains to consider further a fact already briefly alluded to earlier, namely that the two disorders may co-exist. As has already been mentioned, 9 of the 13 patients in this series showed varying degrees of delirium, as manifested by disorientation. It cannot be overemphasized, however, that the two disorders, notwithstanding that they may co-exist, are distinct from one another. Disorientation is not an element in the schizophrenic syndrome, as every psychiatrist knows from his experience with ordinary schizophrenia. Hence, when a person taking bromide enters an acute schizophrenia, and subsequently, having taken more bromide, becomes in addition disoriented, it would be a mistake to say that the schizophrenia and the disorientation are merely the symptoms of a single drug psychosis. There has been an unfortunate tendency in psychiatry to give patients a single diagnosis when they have two or more separate disorders. Consider a man of subnormal intelligence who is also a chronic drinker and is admitted to hospital with delirium tremens. It is one thing to say that for the purpose of the hospital's annual report he should be classified as a case of alcoholic psychosis, the disorder which caused his admission. But it is quite another to say that he is suffering from a single psychiatric disorder when in fact he has three. Consider further a man with pneumococcic pneumonia who develops empyema. No one would say that such a case should be given a single diagnosis such as "pneumococcic chest disease"; the man has two disorders which are distinct even if they co-exist and are in a fashion related. They are distinct because a man may have one without the other. When a patient with bromide schizophrenia keeps on taking the drug and becomes disoriented, it would be misleading to say that he still has the one

psychosis, which now has taken a turn for the worse. If he has grown worse, it was by acquiring a second and new psychosis, delirium—a psychosis as distinct from schizophrenia as empyema is from pneumonia, a psychosis which may befall a schizophrenic no less than a non-schizophrenic and which may supervene upon a toxic as much as upon an ordinary schizophrenia.

What is the relative gravity of bromide delirium and bromide schizophrenia? Anyone who had a choice in the matter would assuredly prefer the former, for no one likes to think of himself as possessing a latent schizophrenia. Nevertheless, from the standpoint of pathophysiology delirium must be regarded as the more deep-seated of the two, since it presupposes a severer dissolution of the highest cerebral centers. The bromide schizophrenic, however unbalanced he may be, is still normal enough to be oriented. As regards depth of dissolution he is closer to normal than the delirious man, who lacks even a child's grasp of his environment.

Since delirium signifies a deeper dissolution than schizophrenia, it seems fair to assume that when they co-exist, the delirium must have supervened upon the schizophrenia in consequence of worsening of the intoxication. This assumption is supported by clinical evidence, which however is imperfect, for it is seldom possible to ascertain with precision the exact order of appearance of symptoms in retrospect; and once the patient has come under the physician's care it is of course impossible to allow the intoxication to worsen so that one might study the progress of the ensuing deterioration.

STATISTICS

This study is based on cases admitted to the Harrisburg (Pennsylvania) State Hospital in a period of 6½ years (1931-37) and to the psychiatric department of the Pittsburgh City Hospital (Mayview, Pa.) in one year (1938-39). Throughout all but a few months of the period of this study the serum of every patient was examined for bromide (Walter-Hauptmann method) soon after admission.

Table I shows the frequency of bromide schizophrenia as compared with other better known bromide psychoses. Only those cases were counted which could positively be said

TABLE I
INCIDENCE OF BROMIDE PSYCHOSES IN PERIOD OF
STUDY (1931-39)

	Male	Female	Total
First admissions	1245	1028	2273
Bromide psychoses:			
Simple intoxication....	5	5	10
Delirium	16	32	48
Hallucinosi (non- schizophrenic) ....	..	3	3
Schizophrenia .....	..	13	13
Total bromide psy- choses	21	53	74

veloped a simple intoxication or delirium. These cases are not listed with the bromide schizophrenias, since the drug did not *produce* a schizophrenia but merely added something new to one that already existed.

Table II gives certain data for the 13 cases of bromide schizophrenia. Three comments may be made in reference to Table II:

1. *Sex*.—All 13 cases were in women. Bromide psychoses show a remarkable preference for women.

2. *Age*.—Compared with cases of bromide delirium, patients with bromide schizo-

TABLE II
DATA ON THIRTEEN CASES OF BROMIDE SCHIZOPHRENIA

Case No.	Sex	Age	Immediate reason for taking bromide	Duration of schizophrenia before admission	Degree of delirium accompanying the schizophrenia			Serum bromide concentration, mgm. per cent	Day of hospital residence on which serum bromide was determined	Duration of schizophrenia after discontinuance of bromide ^b
					None	Slight	Severe ^a			
1	F	40	Fatigue; nervous tension....	2 ½ weeks	..	×	..	325	6th	4 weeks
2	F	27	Nervous tension.....	2 "	..	..	×	350	5th	12 months (1)
3	F	30	Worry over religious conflicts	6 "	×	..	..	250	8th	10 " (1)
4	F	18	Mild depression.....	4 "	..	..	×	150	6th	5 weeks
5	F	55	"Slight stroke" followed by depression and restlessness	1 "	..	×	..	200	6th	5 "
6	F	33	Worry over husband's unemployment	1 "	×	..	..	50	12th	2 "
7	F	39	Hysterical shaking spells....	2 ½ "	..	×	..	325	5th	7 ½ "
8	F	30	Bronchial asthma.....	3 "	..	×	..	157	6th	4 "
9	F	47	Insomnia.....	6 "	..	×	..	306	3rd	2 ½ "
10	F	44	Worries.....	3 "	×	..	..	357	2nd	3 ½ "
11	F	46	Headache.....	6 days	..	×	..	227	3rd	5 months (1)
12	F	31	Fatigue; headache.....	3 weeks	..	×	..	345	5th	3 ½ weeks
13	F	37	Idiopathic epilepsy.....	2 "	×	..	..	333	1st	4 days

Notes: ^a "None" means that the patient was oriented in all spheres, with at most only occasional fleeting disorientation for time.

"Slight" means that there was conspicuous disorientation for time, but no more than occasional lapses as regards place and person.

"Severe" means that there was pronounced disorientation in all spheres.

^b No patient received bromide after admission to the hospital. Most patients received it until admission or shortly before. "Duration after discontinuance," therefore, is in most cases the duration after admission.

to have a bromide psychosis; it had to be established that the psychosis had begun while the patient was taking bromide, that there was bromide in the serum, and that the psychosis cleared up relatively soon after discontinuance of the drug (though, as will be seen presently, some cases take relatively long to clear up).

Several cases were seen in which the patient was clearly schizophrenic before he began to take bromide, after which he de-

veloped a simple intoxication or delirium. These cases are not listed with the bromide schizophrenias, since the drug did not *produce* a schizophrenia but merely added something new to one that already existed. Table II gives certain data for the 13 cases of bromide schizophrenia. Three comments may be made in reference to Table II: 1. *Sex*.—All 13 cases were in women. Bromide psychoses show a remarkable preference for women. 2. *Age*.—Compared with cases of bromide delirium, patients with bromide schizo-

speaking generally, a disease of middle and old age, while bromide schizophrenia is one of relative youth. This is not surprising; people with strongly schizoid personalities are notoriously prone to run into trouble relatively early in life.

3. *Duration after discontinuance of bromide.*—Seven patients got well in less than a month. Three required more than one but less than two months. The remaining 3 required, respectively, five, ten and twelve months. In previous papers (1, 2) it was shown that while bromide delirium usually lasts several weeks after discontinuance, it sometimes lasts several months. This appears to be true also of bromide schizophrenia.

BROMIDE SCHIZOPHRENIA IN THE LIGHT OF THE MODERN CONCEPTION OF SCHIZOPHRENIA

Bromide intoxication is not unique in its ability to activate a latent schizophrenia; other toxemias can do it too. For years it has been known that fevers, infections and debilitating diseases can precipitate a schizophrenia which may clear up when physical health has been restored. Stated differently, when schizophrenia begins acutely in association with severe physical illness the outlook for "cure" is greater than when it makes a furtive appearance during perfect physical health.

The notion of an intoxication activating a latent schizophrenia which subsequently may become latent again is quite in keeping with the modern conception of this psychosis. Schizophrenia can no longer be looked upon as inevitably permanent. It is a psychosis characterized by the presence of certain symptoms and signs, and produced by a variety of causes, some relating to "predisposition," others to "precipitating factors." The duration of the manifest schizophrenia depends on the gravity of its causes. When predisposition is great and precipitating causes irreversible, the schizophrenia will be permanent. Conversely, a benign and remediable cause such as bromide intoxication acting on a constitution not too gravely predisposed may produce a transient schizophrenia which will clear up when conditions once more become favorable.

Constituting as it does a clinical picture

which may be either permanent or transient, schizophrenia may be compared with a variety of other conditions, for example, epilepsy. In the ordinary "idiopathic" epilepsy one deals with a convulsive tendency of which in most cases the patient will never be rid: "ordinary" epilepsy, like "ordinary" schizophrenia, tends to be permanent. In other cases convulsions occur only during a circumscribed physical illness, as in a child with fever or a woman with eclampsia. These cases too, for all their transiency, are cases of epilepsy (in the scientific use of that term), but they are cases in which predisposition is weak enough and exciting causes remediable enough to permit recovery.

MISCELLANEOUS REMARKS

Bromide syndromes.—There are two ways to approach the study of the symptomatology of an intoxication: (1) one might simply make up a long list of all the symptoms known to occur (thus, in bromide intoxication—lethargy, restlessness, depression, fear, delusions, hallucinations, disorientation, etc.), or (2) one might consider the various *syndromes* producible by the intoxication. The second is the better way. To see how misleading the first way is, consider the analogy of a physician who wrote that pneumococcic infection may cause these symptoms: cough, stiff neck, pain in the chest, violent headache, etc. No one would be satisfied with such a mere listing, which ignores the tendency of certain symptoms to occur in constellations. What one wants to know is, What *syndromes* can the pneumococcus produce? It can produce a *pneumonia* (cough, pain in chest, etc.), a *meningitis* (headache, stiff neck, etc.), and so on. Similarly bromide intoxication produces, not a list of symptoms as long as this page, but a variety of syndromes, of which four are now known, each of which has its own constellation of symptoms and characteristic stamp.

Importance of routine bromide tests.—Every psychiatric patient ought to have a quantitative serum bromide determination *routinely* on admission to hospital. It is not enough to do the test in selected cases, for sometimes one does not suspect intoxication until the bromide has had time to vanish from the blood and chemical verification is no

longer possible. It is in the bromide schizophrenias—more so than in the deliria—that one is apt to overlook the bromide factor. In an unexplained delirium the experienced psychiatrist will always remember to rule out bromide. It is different with bromide schizophrenia, which resembles other schizophrenias so closely that even the most alert will be misled. Consider the following sample case. An eccentric schizoid woman, under the influence of emotional stress, becomes nervous and starts to take bromide. Medication is not carefully controlled, and soon there is an intoxication which manifests itself in an increase in previous symptoms and in the appearance of new ones such as inactivity and dullness. She neglects her work and withdraws from her friends. Presently she begins to have hallucinations and ideas of persecution of the type described previously in this report. If the physician does not know that she has a bromide intoxication, and does not know that this intoxication can produce just such a picture, is it any wonder that he makes a diagnosis of ordinary schizophrenia, which, when to everyone's surprise she recovers, is altered to read "schizophrenic episode"?

The recognition of bromide schizophrenia is especially important today, when so much attention is being paid to shock treatment. Shock treatment sometimes produces quick and dramatic "cures," especially in cases of recent onset. But cases of recent onset *might* have been cases of bromide schizophrenia, which would have cleared up anyway (provided the drug was stopped). One wonders to what extent the statistics of shock treatment have been vitiated by the unwitting inclusion of toxic schizophrenias which would have cleared up anyway. The one toxic schizophrenia whose presence or absence can be accurately determined is that due to bromide, and every psychiatrist dealing with acute cases ought to be cognizant of it.

SUMMARY AND CONCLUSIONS

A bromide psychosis is one which starts during bromide intoxication and clears up fairly soon—usually several weeks, though sometimes longer—after discontinuance of

the drug. Four varieties of bromide psychosis are known:

1. *Simple intoxication*, marked by dullness and mental sluggishness, with good orientation, and without delusions or hallucinations.
2. *Delirium*, marked by disorientation, thinking disturbances, mood disturbances (usually fear), delusions, hallucinations and other symptoms.

The first two varieties are well known; the next two are not.

3. *Hallucinosi*s, which differs from delirium in that orientation is intact.

4. *Schizophrenia*, a psychosis of predominantly paranoid coloring which, to the examiner who does not know the history and laboratory findings and has not yet seen the outcome, has all the earmarks of an "ordinary" paranoid schizophrenia, from which it differs only in that it is a transient psychosis which has supervened during bromide intoxication.

Sometimes a bromide schizophrenia is accompanied by disorientation, a symptom which does not belong to the schizophrenic picture. In such cases it is believed that the bromide schizophrenia came first, and that delirium ensued subsequently because the drug was not stopped. Such cases are to be distinguished from those "ordinary" schizophrenics who, because of pre-existing psychotic symptoms, start taking bromide and take it long enough to become delirious. Anyone who takes enough bromide may become delirious, and there is nothing remarkable when this happens to an ordinary schizophrenic. It is quite different with the patient who was not manifestly schizophrenic until bromide made her so.

Bromide schizophrenia differs from bromide delirium and hallucinosis in the following respects (leaving aside for a moment the basic difference between delirium and other psychoses in respect to orientation):

1. Bromide schizophrenia occurs by preference in persons with strong schizoid leanings, while delirium and hallucinosis show no such preference.
2. The characteristic schizophrenic disturbance of rapport is not found in delirium and hallucinosis.
3. The content of the schizophrenia, as

in any ordinary schizophrenia, has a flavor of the bizarre: ideas of influence and mind-reading, ideas of electricity and somatic distortions are apt to be prominent.

4. In schizophrenia the patient's delusions and hallucinations are marked by heightened self-reference, which is not the case to the same degree in delirium and hallucinosis.

It is concluded that bromide intoxication has the power to bring to the surface a latent schizophrenia, which, when favorable conditions have been restored, may once again go into hiding. In this respect bromide intoxication resembles many other intoxications.

It is wise to examine the serum for bro-

midide *routinely* in every acute psychosis, rather than to do so only "when indicated." If the test is not made routinely, one will overlook some cases, for sometimes one does not suspect a bromide psychosis until an unexpected recovery has opened one's eyes, at which point it may be too late to verify the diagnosis chemically.

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ORBITAL CORTEX SYNDROME FOLLOWING LEUCOTOMY

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After prefrontal lobotomy certain signs of frontal lobe deficiency have been described, of which boastfulness, diminished inhibition, impairment of synthesis and planned initiative, and laziness are perhaps the best known. As Nichols and Hunt¹ emphasised, the appearance of these symptoms covers up the pre-existing psychotic symptomatology and, during rehabilitation, the personality tries to reintegrate itself between the two groups of symptoms. Recovery then is the favourable balance of the dual symptomatology.

With these considerations in mind an attempt was made to study the orbital cortex syndrome presented by patients in whom a section of the orbital connective system had been made. The operation is referred to as "orbital leucotomy." The clinical justification for this operation was based on observations of Freeman and Watts (1942), who noticed that "cores in the lower part of the frontal lobe, produced a higher incidence of good results, than cores placed in the upper part of the frontal lobe." Whilst Dax and Radley-Smith (1943) emphasised the clinical significance of the orbital section, Hofstatter, Smolek and Busch (1945) reported their results on 22 schizophrenics in whom only the lower quadrants of the pre-frontal white matter were sectioned. Dax and Radley-Smith (1946) reported also on the "orbital cut," on over 26 mixed cases, and the material analysed below formed a part of their case material.

CASE MATERIAL AND TECHNIQUE

This consisted of 22 patients, 18 females and 4 males. In particular the diagnostic groups were: 5 hebephrenias, 4 simplex, 6 catatonic, 3 paranoid schizophrenias and 4 paraphrenias. The average age of the whole group was 30 years (range 19-52). The premorbid personality of the cases was poor in 36%, and in a corresponding percentage mental illness in the family had been ascertained. The average known duration of ill-

ness was $4\frac{1}{2}$ years (range 2-7). The patients had all received insulin and/or electric convulsive treatment, and some of them prolonged narcosis treatment, but all had remained refractory to these therapeutic measures.

The preoperative measures were as follows: The hair was completely shaved; the preoperative medication consisted of 1/75 grain of atropin, and the subsequent gas and oxygen anaesthesia was preceded by avertin. The incision was made 3 cm. behind the external angular process and 3 cm. above the zygoma. The anterior end of the temporo-parietal suture was exposed and a small trephine hole made anteriorly to the suture line. The dura was incised crucially. By this technique the Sylvian vessels became visible at the lower posterior end of the trephine hole and the brain was entered approximately at the opposite margin. The leucotome (McGregor-Crombie type) was aimed at the mid-point of the line drawn from opposite zygoma to the vertex in the plane of the coronal suture, and inserted to a depth of $4\frac{1}{2}$ cm. from the cortex; its blade was then rotated in the vertical plane, and the cut made. A similar procedure was carried out on the opposite side and finally, the incisions were closed. None of the operation cases had incontinence after 48 hours, but they were markedly restless for the first 8 hours, drowsy and moderately confused for 3-4 days after the operation. Cases with preoperative excitement returned to their morbid behaviour pattern after the third postoperative day.

Neurological complications were transient: in 5 cases spastic tendon jerks and upgoing toes were seen for 24 hours, and in 2 cases slurred speech for the same period. 1 case, a schizophrenia simplex, exhibited, apart from upgoing toe, apathy and slowed down cerebration for 6 weeks. Otherwise no intellectual deterioration was noticed in any of the cases following operation.

RESULTS

The present paper discusses "immediate" results only, which became apparent from 3

¹ Quoted after Freeman and Watts.

to 6 weeks after the operation. The shortest postoperative observation of the reported cases is 12 weeks. Final evaluation can only be ascertained after long "follow up" periods; but in our experience of these cases the ones which did not show improvement within 6 weeks had remained unchanged up to 8 months after the operation.

The operative results may be grouped into three categories: first the social adjustments, which includes the cases who have been discharged or who are learning a new occupation and who would otherwise be discharged and are not in need of further treatment. Secondly: institutional adjustment, denoting cases who, prior to operation, had to be kept in closed wards under constant supervision and who are now in open villas, partaking in the social club activities, but who so far re-

TABLE I

Type	No.	Postoperative adjustment		
		Social	Institution	None
Simplex	4	2	1	1
Hebeph.	5	3	1	1
Catat.	6	..	..	6
Paranoid	3	..	..	3
Paraphr.	4	2	1	1

main incapable of adjusting themselves outside the institution. Thirdly: cases showing slight or no postoperative improvement.

In analysing and relating the clinical data, it seems that no correlation can be made regarding the age, premorbid personality or duration of illness with the favourable or unfavourable results, nor has any such correlation yet been achieved by other workers. The correlation of diagnostic sub-groups to the results obtained is illustrated in Table I. This shows social improvement in only 32% and institutional improvement in 14%; these results compare unfavourably with the reported recovery rates of other workers.

On the other hand, it should be remembered that leucotomy (or lobotomy) is not directed towards amelioration of diagnostic entities, but rather towards the relief of certain symptoms. With this in mind, the case material was re-examined from a symptomatological point of view. It was found that the preoperative psychotic symptoms common to the cases which responded well to orbital leucotomy were: indecisiveness, depersonali-

sation, blockage of thought and some perplexed anxiety; they exhibited vague, dreamy attitudes, lack of initiative and progressive withdrawal. On the other hand, cases which exhibited excitement, restlessness and aggressiveness, or showed an agitated picture with marked tension did not respond to the type of operation as outlined above. Table II illustrates these points;² it also suggests that cases which have been described as having poor outlook from the usual leucotomy viewpoint, respond favourably to isolation of the orbital cortex. This also explains why Freeman and Watts obtained negative results after dividing the orbital connections only; their cases exhibited distress, agitation and great tension. Postoperatively, they also showed a greater

TABLE II

Type	No.	Postoperative adjustment		
		Social	Institution	None
Vague, dreamy, introvert, etc.	9	5	3	1
Deluded, depressed, tension	4	2	..	2
Excited, aggressive, impulsive, etc. ...	9	..	..	9

intellectual deficit, and the reorganisation of the personality after operation was less complete. It should be recalled, that in the Freeman and Watts technique fibres to the convexity of the cortex are undercut and not those to area 10, 11 and 12 (R. Cohn, 1945). If one agrees with Cobb (1943) that the basal cortex represents more the emotional integration and the convexity of the frontal lobe the intellectual integration, the absence of gross personality disturbances after orbital leucotomy can be explained. The symptomatology of Hofstetter's cases is not reported in detail, consequently his results remain incomparable.

For the sake of brevity only three case extracts illustrating the response to orbital leucotomy are given.

CASE I.—E. S., aged 25, schizophrenia simplex. She comes of a sound stock and had fairly good premorbid personality. Five and a half years ago

² Cases exhibiting depressive symptoms have not been analysed, as they should be grouped with non-schizophrenic depressive states.

she became solitary and exhibited blockage of thought. Though she appeared depressed and it was thought that but for lack of initiative, she might have become suicidal, her emotions were dulled. In spite of convulsive therapy and insulin treatment she deteriorated progressively, became more solitary, talked only in telegram style and was ultimately unable to give an account of herself. Orbital leucotomy was performed on 29.12.45. Five days after the operation she greets the doctor smilingly: "I have a bone to pick with you. Why did you have to cut my hair off, and why did you cut me on both sides? Anyhow, I am glad you cut out those silly love ideas from my head . . ." and so on. Fourteen days later she was in another ward, still exhibited a pressure of talk, did any work she could, almost forcing her help on the nurses. There was no sign of introverted tendencies, and she said she was very happy and wanted to have more to do. Six weeks later, in one of the open villas, she rather bullied her fellow patients, but in a pleasant, inoffensive manner. She discussed the operation on several occasions, and noted with delight that she was better and "the whole past is better forgotten." She was described by the others as sociable, cheerful and a good worker. As she kept up her improvement she was discharged four months after the operation.

CASE 2.—T. W., aged 23 years. Hebephrenia. She comes of a good stock and had a very good pre-psychotic personality. Was serving in the W.R.N.S. when after a bombing her first attack commenced. She was transferred to a service hospital where the diagnosis was established. Had electrical convulsion treatment but did not respond to it. When admitted to Netherne as a civilian, she was markedly introverted, hardly answered questions except in telegram style. She neglected her appearance and giggled frequently for no apparent reason, and was lacking in initiative. Having been refractory to all attempted treatment, orbital leucotomy was performed. Seven days after the operation her giggling disappeared and has never returned. She was able to give a good account of her past history but was disinclined to discuss her illness. During the next few weeks she became increasingly active, but in a "restless" manner. She started off with one activity, dropped it easily to turn to something else, *i.e.*, drawing, needlework, help in the ward, etc. Two months after the operation she forced her company on others with unnatural gaiety, and made herself a nuisance in the patient's social club. At the time of reporting her personality reintegration is more or less established. Although she is carefree and extroverted and shows no signs of lack of initiative her recovery remains an institutional one.

CASE 3.—S. T., aged 23. Hebephrenia. Comes of a sound stock but had a bad prepsychotic personality. Her illness commenced 3½ years prior to operation. She developed uncoordinated restlessness, showed bizarre mannerisms and was liable to ag-

gressive and impulsive actions. She neglected her appearance and masturbated excessively. Previous therapeutic attempts were without result. Orbital leucotomy was performed on 15.3.46. She remained incontinent for two days after the operation and during convalescence the effects of orbital leucotomy became apparent: she was restless, could not carry on any planned activity, she laughed, giggled and said she felt like "jumping over the moon." She was jocular in a crude and dissociated way and annoyed her wardmates and the nursing staff. In spite of every attempt no improvement followed five months after the operation. This case evidently belongs to the not recovered group.

COMMENT

Following the orbital leucotomy three features of the symptomatology produced are more marked than following the conventional prefrontal leucotomy. These are: extroversion, increased motor activity and euphoria. This syndrome seems very similar to Rylander's (1939) observation on patients who lost part of their orbital region after lobotomy; these latter cases exhibited euphoria, restlessness and lack of restraint. Of earlier clinical observations Spatz' (1937) findings on Pick's disease denoted similar symptoms when the orbital and temporal cortex were involved: such cases exhibited restlessness, euphoria and talkativeness. Of the experimental results, Ruch and Shenkin (1943) demonstrated that bilateral ablation of area 13 produces hyperactivity.

In an attempt to correlate the clinical syndrome (extroversion, increased motor activity and euphoria) to neural levels, the operation was carefully reproduced on post-mortem material as Dax reported. It revealed that the operative cut lies basally and medially in the frontal lobe, at a level of Brodmans areas 24 and 32 on the medial; 8, 9, 46, 45, 47 on the convex; 11, 12 on the basal surfaces of the hemispheres. The connective fibres most probably severed included the thalamo-cortical radiation to areas 10, 11, 12 and part of those connecting area 46. It may be that some fibres to area 13 were damaged; to a greater extent the uncinate fasciculus was severed, and the callosal radiation was incompletely severed. It seems that the greater part of the orbital cortex was isolated. The emphasis is always laid on the severance of the thalamic radiation from the magno-

cellular part of the dorsomedian nucleus; yet it seems that the connecting pathways to the temporal lobe may have neuropathological significance in evaluating the "orbital" syndrome. McCulloch (1944) demonstrated that area 11 fires to area 38 and it is known that the uncinate fasciculus connects 11 and 12 to the same temporal region. Spatz' observations as quoted above included involvement of the temporal areas; Head and Holmes attributed feelings of depersonalisation to irritative phenomena of the temporal areas, and Kluver and Bucy (1938) noted diminished fear and anger responses after bilateral temporal lobectomy on monkeys. This evidence supports our clinical observations that the severance of orbito-temporal inter-relations may play a greater part in ameliorating certain mental symptoms than has hitherto been supposed.

SUMMARY

1. The orbital cortex was partly isolated on 22 schizophrenics, and good response was observed where there were symptoms of introversion, blockage, emotional dulling and depersonalisation present.

2. The isolation of the orbital lobe produced a triad of symptoms described as: extroversion, increased motor activity and euphoria.

3. It was emphasised that the new symptoms produced, balance well with the pre-existing psychotic symptoms.

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IRRELEVANT AND METAPHORICAL LANGUAGE IN EARLY INFANTILE AUTISM¹

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During the past few years, I have had occasion to observe 23 children whose extreme withdrawal and disability to form the usual relations to people were noticed from the beginning of life. I have designated this condition as "early infantile autism." Phenomenologically, excessive aloneness and an anxiously obsessive desire for the preservation of sameness are the outstanding characteristics. Memory is often astounding. Cognitive endowment, masked frequently by limited responsiveness, is at least average. Most patients stem from psychometrically superior, though literal-minded and obsessive, families.

This condition offers fascinating problems and opportunities for study from the points of view of genetics, of the psychodynamics of earliest parent-infant relationship, and of its resemblances to the schizophrenias. Among numerous other features, the peculiarities of language present an important and promising basis for investigation. I should like to mention briefly the "mutism" of 8 of the 23 children, which is on rare occasions interrupted by the utterance of a whole sentence in emergency situations; the use of simple verbal negation as magic protection against unpleasant occurrences; the literalness which cannot accept synonyms or different connotations of the same preposition; the self-absorbed inaccessibility which has caused most of the parents to suspect deafness; the echolalia-type repetition of whole phrases; and the typical, almost pathognomonic, pronominal reversals which consist of the child's reference to himself as "you" and to the person spoken to as "I."

Frequently these children say things which seem to have no meaningful connection with the situation in which they are voiced. The utterances impress the audience as "nonsensical," "silly," "incoherent," and "irrelevant." These are the terms used by the report-

ing parents, physicians and nursery school teachers.

We were fortunate in having opportunities to trace some of these "irrelevant" phrases to earlier sources and to learn that, whenever such tracing was possible, the utterances, though still peculiar and out of place in ordinary conversation, assume definite meaning. I should like to illustrate this with a few characteristic examples:

Paul G., while observed at our clinic at five years of age, was heard saying: "Don't throw the dog off the balcony." There was neither a dog nor a balcony around. The remark therefore sounded irrelevant. It was learned that three years previously he had thrown a toy dog down from the balcony of a London hotel at which the family was staying. His mother, tired of retrieving the toy, had said to him, with some irritation: "Don't throw the dog off the balcony." Since that day, Paul, whenever tempted to throw anything, used these words to admonish and check himself.

"Peter eater" was another of Paul's "nonsensical," "irrelevant" expressions. It seemed to have no association with his experiences of the moment. His mother related that, when Paul was two years old, she once recited to him the nursery rhyme about "Peter, Peter, pumpkin eater," while she was busy in the kitchen; just then she dropped a saucepan. Ever since that day Paul chanted the words "Peter eater" whenever he saw anything resembling a saucepan. There was, indeed, in the playroom a toy stove on which sat a miniature pan. It was noted then that Paul, while saying these words, glanced in the direction of the stove and finally picked up the pan, running wildly around with it and chanting "Peter eater" over and over again.

John F., at five years of age, saw Webster's Unabridged Dictionary in the office. He turned to his father and said: "That's where you left the money." In this instance the connection was established by the fact

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

that John's father was in the habit of leaving money for his wife in the dictionary which they had at home. Upon being shown a penny, John said: "That's where play ten pins," as a sort of definition of penny. His father was able to supply the clue. He and John played ten pins at home with a children's set. Every time that John knocked over one of the ten pins, his father gave him a penny.

Elaine C. had been surrounded in her infancy with toy animals of which she was very fond. When she cried, her mother used to point out to her that the toy dog or toy rabbit did not cry. When Elaine was seen at seven years of age, she still kept saying when she was fearful and on the verge of tears: "Rabbits don't cry." "Dogs don't cry." She added a large number of other animals. She went about, when in distress, reiterating the seemingly irrelevant words: "Seals don't cry." "Dinosaurs don't cry." "Crayfishes don't cry." She came to use the names of these and other animals in a great variety of connections.

Jay S., not quite four years old, referred to himself as "Blum" whenever his veracity was questioned by his parents. The mystery of this "irrelevance" was explained when Jay, who could read fluently, once pointed to the advertisement of a furniture firm in the newspapers, which said in large letters: "Blum tells the truth." Since Jay had told the truth, he *was* Blum. This analogy between himself as a teller of the truth and Blum does not differ essentially from the designation of a liar as Ananias, a lover as Romeo, or an attractive lad as Adonis. But while these designations are used with the expectation that the listener is familiar with the analogy, the autistic child has his own private, original, individualized references, the semantics of which are transferable only to the extent to which any listener can, through his own efforts, trace the source of the analogy.

The cited examples represent in the main metaphorical expressions which, instead of relying on accepted or acceptable substitutions as encountered in poetry and conversational phraseology, are rooted in *concrete, specific, personal* experiences of the child who uses them. So long as the listener

has no access to the original source, the meaning of the metaphor must remain obscure to him, and the child's remark is not "relevant" to any sort of verbal or other situational interchange. Lack of access to the source shuts out any comprehension, and the baffled listener, to whom the remark means nothing, may too readily assume that it has no meaning at all. If the metaphorical reference to Ananias, Romeo or Adonis is not understood, dictionaries, encyclopedias or informed persons can supply the understanding. But the personal metaphors of the autistic children can convey "sense" only through acquaintance with the singular, unduplicated meaning which they have to the children themselves. The only clue can be supplied by the direct observation and recall of the episode which started off the use of each particular metaphorical expression.

Occasionally, though not very often, a chance gesture or remark of the child himself may lead to the understanding of a metaphor. This was the case when Jay S. happened to point to the Blum advertisement. This was also the case when five-year-old Anthony F. solved the puzzle of his frequently expressed fondness for "55." On one occasion, he spoke of his two grandmothers. We knew that one of them had shown little interest in him, while the other had reared him with much patience and affection. Anthony said: "One is 64 [years old], and one is 55. I like 55 best." The seemingly irrelevant preoccupation with a seemingly arbitrary number can now be recognized as being heavily endowed with meaning. It is Anthony's private way of expressing affection for his grandmother.

This phenomenon of metaphorical substitution is very common among our autistic children. Donald T., at seven years of age, was asked the Binet question: "If I were to buy 4 cents worth of candy and give the storekeeper 10 cents, how much money would I get back?" He obviously knew the answer. His reply, however, was not "6 cents" but: "I'll draw a hexagon." Two years previously, at 5 years of age, Donald had been scribbling with crayons; all the while he kept saying seriously and with conviction: "Annette and Cecile make purple." It was learned that

Donald had at home five bottles of paint. He named each after one of the Dionine quintuplets. Blue became "Annette," and red became "Cecile." After that, Annette became his word for blue, and Cecile for red. Purple, not being one of the five colors, remained "purple."

It is mainly the private, original frame of reference which makes these substitutions seem peculiar. We witness similar processes in the introduction of trade names for perfumes, wines, cigarettes, cigars, paints and many other items. Etymology abounds with similar derivations. Common usage makes it unnecessary to know the original source in order to get the meaning. An ulster is a certain type of top coat whether or not you connect it with the county in Ireland from which it has its name. You need not know that a serpent is a "creeper" or that a dromedary is a "runner." It does not matter whether or not you know that filibuster is a corrupted form of "freebooter."

The autistic child does not depend upon such prearranged semantic transfers. He makes up his own as he goes along. In fact, he can keep transferring and retransferring to his heart's desire. Gary T., at five years, designated a bread basket as "home bakery." He did not stop there. After this, *every* basket to him became a "home bakery." This was his term for coal basket, waste basket or sewing basket. This procedure, too, has its etymological counterparts. The original meaning of "caput" is transferred from anatomy to anything which, literally or figuratively, is at the top or at the "head," whether this be "captain," the head of a group of people, "capitol," the top of a pillar, or "chapter," the inscription over a section of a book. The transfer does not even stop there, for a "chapter" then becomes not only the "heading" of the section but the whole section itself.

From these observations we may safely draw a number of significant conclusions:

1. The seemingly irrelevant and nonsensical utterances of our autistic children are metaphorical expressions in the sense that they represent "figures of speech by means of which one thing is put for another which it only resembles." The Greek word *metapherein* means "to transfer."

2. The transfer of meaning is accomplished in a variety of ways:

- a. Through substitutive analogy: Bread basket becomes "home bakery"; Annette and Cecile become "red" and "blue"; penny becomes "that's where play ten pin."

- b. Through generalization: *Totum pro parte*. "Home bakery" becomes the term for *every* basket; "Don't throw the dog off the balcony" assumes the meaning of self-admonition in *every* instance when the child feels the need for admonishing himself.

- c. Through restriction: *Pars pro toto*. The 55-year-old grandmother becomes "55"; a teller of the truth becomes "Blum"; the number 6 is referred to as "hexagon."

3. The linguistic processes through which the transfers are achieved do not as such differ essentially from poetical and ordinary phraseological metaphors. Etymologically, much of our language is made up of similar transfers of meaning through substitutions, generalizations and restrictions.

4. The basic difference consists of the autistic privacy and original uniqueness of the transfers, derived from the children's situational and emotional experiences. Once the connection between experience and metaphorical utterance is established, and only then, does the child's language become meaningful. The goal of the transfer is intelligible only in terms of its source.

5. In contrast to poetry and etymology, the metaphorical language in early infantile autism is not directly communicable. It is not primarily intended as a means of inviting other people to understand and to share the child's symbols. Though it is undoubtedly creative, the creation is in the main self-sufficient and self-contained.

"The abnormality of the autistic person," say Whitehorn and Zipf, "lies only in ignoring the other fellow: that is, it lies in his disregard of the social obligation to make only those changes which are socially acceptable in the sense that they are both understandable and serviceable in the group. Naturally, once the autistic person pursues his own linguistic and semantic paths of least effort, the result may well appear to his perplexed auditor as a disorder of meanings, or even as a disorder of association. Yet the autistic speaker, in making his

own language, without the nuisance of satisfying the auditor's needs, may employ the same principles of linguistic and semantic change as does the normal person, though not with the same care to insure community acceptance."

The above observations and conclusions gain additional importance because they give concrete evidence to the long-felt assumption that similar mechanisms prevail in the "irrelevant," "incoherent," and metaphorical language of adult schizophrenics. In the case of the latter, the earlier and earliest connections and pertinences have often been lost irretrievably, as they have been even for some of the expressions of our children at so early an age. But the examples cited (and the study by Whitehorn and Zipf) justify the conviction that schizophrenic "irrelevance" is not irrelevant to the patient himself and could become relevant to the audience to the extent to which it were possible to find the clues to his private and self-contained metaphorical transfers.

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DISCUSSION

J. LOUISE DESPERT, M. D. (New York, N. Y.).—The work of Dr. Kanner on infantile autism points to the need for a revision of the concept of schizophrenia. The analogies of his cases with some of the schizophrenic children are obvious; and the disease process seems to be the same. Thus, regression as a fundamental diagnostic indication would appear less valuable than has been previously reported.

The paper just read by Dr. Kanner raises another fundamental issue, and one which has been grossly neglected in spite of numerous studies of language and thinking in the schizophrenias. I refer to the affective substratum of language function and development. As reported by Dr. Kanner, the majority of his autistic children come from "psychometrically superior though literal-minded and obsessive families," and it can be assumed that there was a profound disturbance in the parent-child emotional relationships from the earliest stages of the infants' language history. Another observation, made on the speech and language function of schizophrenics, undoubtedly applies to these autistic children, although I do not recall that it has been

reported; and again this is related to the disturbance of the parent-child emotional relation: in all young schizophrenic children speech presents peculiarities which, however varied, have one common characteristic—the voice lacks that emotional tone which stamps the individual as himself and unlike others; it is often described as unnatural, peculiar; it lacks expressiveness and often does not seem to belong to the personality.

Pichon, in his studies of language development, has pointed out that the first and foremost requirement for language to arise and develop is what he calls "la fonction appetitive"—the appetite for language. This is indeed a very apt term, meaning literally "the direction of desire towards an object or purpose" (*Oxford Dictionary*); it expresses the urge of the individual to express himself in language symbols and phonetic signs for purposes of communication. Appetition for language is manifested in infants long before language is constituted and sentence formation in its most rudimentary form appears. In fact, it can be said that it precedes the first phonetic forms and represents the first stage of speech as a means of communication. This appetite for language is conspicuously lacking in the autistic and schizophrenic child, even though coincidentally the child may have acquired an extremely large vocabulary. Appetition for language is in close association with, if it does not determine, the emotional tone of speech.

Dr. Kanner, in his careful observation and analysis of the semantics of autistic children, has indicated that the transfer of meaning is accomplished through substitutive analogy, generalization and restriction. It must be stressed that these mechanisms are all operating in the course of language development in the young normal child. They are, however, so transitory as to pass almost unnoticed. They are noted before that structuralization of language which permits adequate identification of individual symbols. When the normal 1½ to 2-year-old child says "Mummy" as he handles some familiar object which he identifies with his mother, he uses analogy through restriction. It is not very long, however, before he readily makes the distinction between the two. It is highly probable that it is the very emotional experience involved in his relation to his mother as love object which makes it possible to establish the distinction between individual symbols.

The autistic child, even to a greater degree than the schizophrenic child, does not have adequate human relationships on an emotional basis. Five-year-old Anthony, who is said to be fond of his grandmother, has probably not achieved with her a full love object relation. It is as though he were identified with part of the love object rather than the whole, which the normal 1½-year-old very rapidly achieves. Why "55" was selected by Anthony from the many possible symbols associated with his grandmother probably cannot be ascertained, but it is quite likely that a personal experience of the same nature as that reported in the case of the "Peter eater" of Paul is involved. Excessive

affect binding of the symbol in terms of a personal experience is probably accountable for these "irrelevant and metaphorical" language expressions. They are frequently found in the records of schizophrenic children who, contrary to the autistic children, had developed a language structure prior to the onset of their illness. When 8-year-old Joan refers to her father as "the man who sleeps here and has bacon and eggs in the morning that man," or when 4-year-old Peter, referring to his grandmother, says "there is another kitchen on the other side," these two schizophrenic children exhibit apparently irrelevant and metaphorical language expression.

In an earlier publication I have reported that in the history of schizophrenic children there were found early dissociative phenomena which were in the nature of a disturbed integration of language-sign and language-function. This was particularly true of the schizophrenic children with insidious onset. This group, incidentally, is the one presenting the greatest similarity with the children described by Dr. Kanner as autistic. Neologisms which are also frequently found in the schizophrenic children's records represent further complexities in the elaboration of apparently irrelevant symbols. Indeed, an important part of the treatment of schizophrenic children includes the breaking down of these symbol elaborations.

Dr. Kanner brings out the contrast between the metaphorical language of infantile autism and the language of poetry and mythology. The essential difference would be that in the autistic child's language there is lacking the intention to make himself understood. I wonder, however, whether the autistic child is not himself enmeshed in his own symbols, for while 4-year-old Jay refers to himself as Blum, he does not say, and probably cannot say, "*I am Blum*" or "*I am Blum because.*" In so far as human relationships are concerned, the autistic child lives in an emotional vacuum; language symbols have emerged with overwhelming affect charges which have seemingly blocked the emergence of other symbols. Such experiences are possible because the binding power of free flowing affect characteristic of the normal child is lacking. It is highly significant, for instance, that the "I not I" distinction is not established in the autistic child, as it is early in the development of language in the normal child, and Dr. Kanner pointedly selects the pronominal reversal as an almost pathognomonic sign of infantile autism. Since the appearance of the first-person pronoun in language development shortly follows that stage of individuation which corresponds to the child's consciousness as one, whole, and apart from others, the importance of this sign cannot be over-emphasized.

GLUCOSE TOLERANCE IN CHRONIC ALCOHOLISM¹

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Since the incidence of alcoholic intoxication has been increasing markedly in recent years, the writers considered it of value to investigate some aspects of carbohydrate metabolism in 50 cases of chronic alcoholism.

METHOD

A chronic alcoholic was considered to be any person who drank to such a degree that it interfered with his work and home life and who could not stop drinking. The case material presented was obtained from the neuropsychiatric section of a station hospital. Although some of the patients were admitted while intoxicated, the laboratory examinations were performed after the effects of the alcohol had subsided. Each patient was given an intravenous glucose tolerance test utilizing Soskin's technique(1). The patients were prepared for the study in accordance with the recommendations made by Conn(2), consisting of a diet containing at least 400 grams of carbohydrate daily for several days prior to the test. A 50% solution of glucose was given intravenously in the dosage of $\frac{1}{3}$ gram of glucose per kilogram of body weight. Micro-blood sugars were performed on capillary blood by the Somogy-Shaffer-Hartmann(3, 4) technique, utilizing a zinc hydroxide precipitation of proteins(5). This method yields blood sugars which approximate true blood sugar values with normal fasting values ranging between 60 and 90 mgm%. These values are approximately 20 mgm% less than values given by tungstic acid precipitation methods, the commonly used technique.

RESULTS

In this test, the blood sugar should return to a level not higher than 5 mgm% above the fasting value within one hour. We considered any value higher than that an evi-

dence of decreased tolerance or possible liver disease. If the blood sugar fell below 50 mgm% during the course of the test, or if

TABLE I

GLUCOSE TOLERANCE TESTS OF ALCOHOLICS WITH
INCREASED TOLERANCE

The values given are true blood sugars with normals about 20 mgm less than standard values

Case No.	Fasting	$\frac{1}{2}$ hour	1 hour	$1\frac{1}{2}$ hours	2 hours	$2\frac{1}{2}$ hours	3 hours
1.....	64	55	50	38	47	57	60
2.....	62	91	66	61	49	69	71
3.....	60	100	49	41	44	41	50
4.....	55	110	64	58	56	42	45
5.....	61	105	90	45	30	48	42
6.....	68	48	60	68	48	45	40
7.....	66	133	78	41	40	45	46
8.....	36	71	44	41	44	36	22
9.....	47	93	57	63	68	50	53
10.....	67	148	82	60	48	61	68
11.....	90	133	71	49	42	53	55
12.....	81	135	72	56	47	54	57
13.....	81	137	101	92	61	65	48
14.....	74	163	100	63	47	46	52
15.....	78	142	83	55	46	65	65
16.....	82	134	59	61	65	38	49
17.....	71	218	107	90	68	47	49
18.....	73	44	58	67	71	60	55
19.....	73	58	51	64	71	73	71
20.....	84	67	63	73	76	76	81
21.....	77	157	96	66	56	49	89
22.....	65	67	70	71	78	..	..

TABLE II

GLUCOSE TOLERANCE TESTS OF ALCOHOLICS WITH
DECREASED TOLERANCE

Case No.	Fasting	$\frac{1}{2}$ hour	1 hour	$1\frac{1}{2}$ hours	2 hours	$2\frac{1}{2}$ hours	3 hours
1.....	101	187	169	125	102	84	56
2.....	84	175	121	86	69	70	71
3.....	87	160	126	97	63	64	59
4.....	50	118	94	87	70	65	55
5.....	56	142	98	78	59	80	74

the blood sugar fell very rapidly, we considered it evidence of increased tolerance. Of our 50 cases, 22 showed evidence of increased tolerance (Table I). Five cases showed decreased tolerance (Table II). The

¹ This work was done while the writers were on active duty in the Army of the United States at Boca Raton Field, Florida.

cases were classified into 17 psychoneurotics, 26 inadequate personalities and 7 mental defectives on the basis of psychiatric and Rorschach examinations (to be described in a future paper). Table III describes the

TABLE III
GLUCOSE TOLERANCE DISTRIBUTION AMONG
VARIOUS TYPES OF ALCOHOLICS

	Glucose tolerance		
	In- creased	De- creased	Nor- mal
Psychoneurotic alcoholics ..	13	0	4
Inadequate personalities ...	5	3	18
Mental defectives	4	2	1
All cases	22	5	23

distribution of the glucose tolerance reactions among our various categories of patients. It is to be noted that the increased tolerance occurred mainly in the psychoneurotics and the mental defectives.

COMMENT

Increased glucose tolerance has not been previously observed in chronic alcoholics. Tucker and Porter(6) observed hypoglycemia in 4 cases immediately following acute intoxication but attributed it to some contaminant in the liquor consumed. Voegtlin(7), using the oral test, found decreased glucose tolerance in alcoholics. Decreased glucose tolerance would be expected in many alcoholics as this is a frequent sign of impaired liver function. However, this finding was observed in only 5 of our cases. Other liver function tests were done in 3 of these cases but yielded no evidence of impairment of hepatic function. Because increased tolerance occurred so frequently in our psychoneurotic alcoholics, this test was performed on about 100 other cases of psychoneurosis who were not alcoholic. Only 7 cases of increased tolerance were seen in this group. It does not appear therefore that psychoneurotic symptoms could be responsible for this finding.

We cannot definitely explain why increased glucose tolerance and hypoglycemia should occur so frequently in chronic alcoholics. Psychiatric patients of all types frequently show deviations in metabolic tests. In addition, dietary deficiencies associated with alcoholism are at times etiologic factors

in the impairment of liver function and may lead to deviation of the hepatic regulation of the blood sugar. We do not however believe that hypoglycemia leads to alcoholism since the patients drink at all times, after meals as well as before them. It is known that hypoglycemia gives rise to feelings of faintness, restlessness and hunger. This faintness and restlessness have concomitant mental symptoms which aggravate the inadequacy and insecurity of the alcoholic and thereby increase the desire for alcohol. Alcohol, being a source of energy, can relieve the hunger to some degree. In this way, the hypoglycemic tendencies can set up a vicious cycle which will increase the addiction considerably.

Acute alcoholic states have long been treated with carbohydrate infusions among other measures. In view of our findings with respect to glucose tolerance, it would be well to watch the chronic alcoholic as well and prescribe frequent feedings to prevent any hypoglycemia that might occur.

SUMMARY

Glucose tolerance studies in 50 chronic alcoholics showed decreased tolerance in 10% of the cases and increased tolerance in 44% of the cases. The incidence of hypoglycemia and its role in the aggravation of tension states common in alcoholism should be considered in its therapy.

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REPORTS OF COMMITTEES

The following reports of committees were presented to the Association and approved by it during the convention sessions in Chicago, Illinois, May 27-30, 1946.

REPORT CONCERNING AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY

May 27, 1946

The Council of The American Psychiatric Association in 1945 asked that its representatives on the American Board of Psychiatry and Neurology make a study of the work of the Board and report thereon to this Association, since dissatisfaction existed and a proposal for a separate Board had been considered.

The representatives of The American Psychiatric Association on the Board in 1945 were John Murray, Karl Bowman, Harold Palmer and John Whitehorn. Three of these, Palmer, Murray and Whitehorn, held a committee meeting at Philadelphia on November 18, 1945, just two days before Dr. Palmer's death. The report resulting from that meeting was presented to the Council of The American Psychiatric Association, December 18, 1945. It presented several suggestions for changes in Board practice, which were afterward presented to the Board by the President of this Association, Dr. Karl Bowman, at the meeting of the Directors of the Board, December 19, 1945. Some of these suggestions were accepted immediately by the Board, for example, the policy was adopted of making a brief annual report to the three organizations represented on the Board. Such reports have recently been sent, in accordance with this policy, to The American Psychiatric Association, the American Neurological Association and the American Medical Association.

A new set of officers was elected by the Board. Dr. Francis J. Braceland was elected Secretary-Treasurer, who serves in effect as the executive of the Board. Because I was elected President of the Board, I wish to make it clear that in making this report at this time I am not doing so officially as President of the American Board of Psychiatry and Neurology but only as a member of The American Psychiatric Association representation on the Board. The other representatives of this Association are now Karl Bowman, Francis Braceland and George H. Stevenson.

After careful consideration by a committee and by correspondence, the Board adopted at a meeting in Chicago last Thursday, May 23, 1946, a number of changes in by-laws concerning its policies and procedures in regard to certification. It is not feasible to make a complete report at this time. A complete statement will soon be ready. I shall mention here a few of the changes.

The Board decided to arrange for different examinations for those seeking certification in psychiatry and in neurology, and to increase the training requirements of those seeking double certification.

The Board has also drawn up brief statements of the approved types of training programs for psychiatric and for neurological training. The present specifications read as follows:

SECTION 6. CLASSES OF APPLICANTS

After January 1, 1947, no certification will be granted without examination.

Class A

Applicants who graduated before the foundation of this Board (1934) will not be held to the strict interpretation of the published requirements in formal graduate training. Under such circumstances the Board will consider the training and experience of the applicant and decide whether or not he will be admitted to the examination.

Class B

Candidates graduated from a medical school after 1934 shall fulfill the following special requirements:

Professional Education

1. Graduation from a Medical School in the United States or Canada approved by the Council on Medical Education and Hospitals of the American Medical Association. In the case of an applicant whose training has been received outside the United States and Canada, his credentials must be satisfactory to the afore-mentioned Council and the Advisory Board for Medical Specialties.

2. Completion of a year's internship approved by the same Council in general medicine, general surgery, pediatrics, or a rotating internship.

3. The nine-months wartime internships, assistant residencies or residencies will be accepted as an equivalent of one year.

Special Training

(To be put in force January 1, 1948)

Admission to the examination for certification in psychiatry or neurology requires a total experience of not less than five years.

There shall be a period of three years of full-time study in institutions recognized by the Council on Medical Education and Hospitals of the American Medical Association, and approved by this Board as competent to provide training in psychiatry or neurology. A candidate may submit to the Board evidence of special training in psychiatry or neurology not covered in these specifications, for its evaluation and approval.

In addition to three years of training under supervision, each candidate should have two years of clinical practice with major responsibility for the care of patients.

This training for psychiatrists should include clinical work with psychoneurotic and psychotic patients, combined with the study of the basic psychiatric sciences, medical and social psychology,

psychopathology, psychotherapy, and physiological therapies, including a basic knowledge of the form, function and pertinent pathology of the nervous system. This training should be supervised and guided by teachers competent to develop skill and understanding in the utilization of such basic knowledge in dealing with patients. Mere factual knowledge is not sufficient. This training period should include instruction in the psychiatric aspects of general medical and surgical conditions and the behavior disorders of children and adolescents sufficient to develop practical ability to direct the treatment of such conditions. It should also include collaborative work with social workers, clinical psychologists, courts and other social agencies. The training program of the candidate for certification in psychiatry should include sufficient training in clinical neurology to recognize and to evaluate the evidences of organic neurological disease.

The training for neurologists should be based on clinical work with adults and children with neurological disorders, including the neurological complications of medical and surgical conditions. This shall be combined with study of the basic neurological sciences, neuroanatomy, neurophysiology, neuropathology, and neurooentgenology. This training should be supervised and guided by teachers competent to develop skill and understanding in the utilization of such basic knowledge in dealing with patients. Mere factual knowledge is not sufficient. This training should include sufficient clinical psychiatry to enable the candidate to recognize and evaluate the common psychiatric reactions.

Candidates seeking certification in both neurology and psychiatry or supplementary certification in one after being certified in the other, must submit evidence satisfactory to the Board of additional two years of full-time basic training in the supplementary specialty.

SECTION 7. TRAINING IN THE ARMED FORCES

Credit will be granted for one year of basic training in the psychiatric or neurologic services of the Army, Navy, Public Health Service and Veterans Administration. Further credit for basic training will be granted only if the training has been received in an institution recognized by the Council on Medical Education of the American Medical Association and approved by this Board. Time beyond one year spent in an approved psychiatric or neurologic department of the above Government agencies may be credited to experience, providing the candidate has been regularly assigned to a service in neurology or psychiatry.

Respectfully submitted,
JOHN C. WHITEHORN, M.D.

REPORT OF COMMITTEE ON INTERNATIONAL RELATIONSHIPS

April 30, 1946.

To the Council of The American Psychiatric Association:

As the retiring chairman of your Committee on International Relationships, I have to report. only

lack of progress in the work of that Committee. I offer no apologies, for there have been various obstacles, of which perhaps the most important has been the lack of a continuing organization to carry out the functions of your committee. I think that its functions can be well realized only through a good continuing organization with its adequate personnel, and I look forward to the assumption of the work by the projected Psychiatric Foundation.

It appears to me indubitable, that the practical applications of psychiatric knowledge can be important to the objective of stabilizing world affairs and maintaining peace. I think that the first step indicated in such direction is to further friendly and understanding interrelationships among psychiatrists world-wide. If, as I hope, the Psychiatric Foundation will become recognized throughout the world as the authoritative clearing house for the practical applications of psychiatric knowledge, then it should have the friendly interest and respect of psychiatrists everywhere. This condition should promote friendly understanding and agreement. Thus the Foundation should bring psychiatric wisdom to bear internationally.

I have no silly thought that the accomplishment of the objectives of your committee can be other than slow. The representatives of other fields of endeavor will each regard that he holds the key to world stability and lasting peace. There will doubtless be a tremendous lag in the recognition that psychiatry has something useful to offer. World War II has fortunately given an impetus to such recognition. The Psychiatric Foundation should be the vehicle for the further extension of psychiatric education, which latter, albeit a long time endeavor, seems to offer the best promise. I think that the functions of your Committee on International Relationships should become an important activity of the Psychiatric Foundation, with the reasonable expectancy of a degree of success.

I would at this time express my appreciation for the support given me, as chairman, by the members of your committee. While I do not offer apologies for the failure of better accomplishment, I nevertheless deeply regret such failure. My very best wishes to Doctor George H. Stevenson, whose recommendations led to the appointment of this committee, upon his succeeding me as its chairman.

GLENN MYERS, M.D.

REPORT OF THE DIRECTOR OF THE PSYCHIATRIC PERSONNEL PLACEMENT SERVICE

To the Council of The American Psychiatric Association:

I have the honor of presenting herewith the report of the Psychiatric Personnel Placement Service for the period ending May 15, 1946.

A PLACEMENT SERVICE IS ESTABLISHED

It is unnecessary to go into detail concerning the reasons for organizing a Placement Service for psychiatrists. Suffice it to say, toward the end of the summer of 1945, it became increasingly evident that physicians in the armed forces, who were interested

in obtaining further training in psychiatry, or in finding positions in this field, upon their return to civilian life, would require advice and assistance. The idea of a joint committee of The American Psychiatric Association and the National Committee for Mental Hygiene for this purpose was formulated. After preliminary discussions, a definite plan of operation, including a tentative budget, was evolved, agreed upon, and approved by the governing bodies of these two organizations. Each of them appointed a committee to function together as a joint Advisory Committee on Psychiatric Personnel Placement, and the special project known as the Psychiatric Personnel Placement Service came into being. It began operating on December 11, 1945.

MEMBERSHIP OF THE ADVISORY COMMITTEE

The Advisory Committee is composed of the following members: Dr. Samuel W. Hamilton, Dr. Arthur H. Ruggles, and Dr. Howard W. Potter, representing The American Psychiatric Association; Dr. John D. Griffin, representing Canada and also The American Psychiatric Association; and Dr. Frank Fremont-Smith, Dr. Frank J. O'Brien, Dr. Frederick W. Parsons and Miss Mildred Scoville, representing the National Committee for Mental Hygiene. Dr. Fremont-Smith is the Chairman and Dr. Hamilton, Vice-Chairman.

MEETINGS OF THE ADVISORY COMMITTEE

The Advisory Committee has held meetings in New York on October 10, November 24, and December 19, 1945; and on February 15 and May 10, 1946. There has been practically a full attendance of the members at all of these meetings.

OBJECTIVES

The primary objectives of the Placement Service, as outlined by the Advisory Committee, are: (1) to list the interests and qualifications of psychiatric personnel separated from the armed forces; (2) to assist veteran physicians interested in psychiatry in finding suitable posts and training opportunities in which they can be useful and happy; and (3) to encourage the creation of new positions and the increase of training facilities.

SCOPE OF ACTIVITIES

The Placement Service, under the guidance of the Advisory Committee has endeavored at all times to include within the scope of its activities the needs and interests of the two organizations which it represents.

From the very beginning, our attention has been focused upon medical officers returning to civilian life from the Army and Navy. We have found time, however, also to assist the relatively few non-veteran doctors who have consulted us. Nor have we limited our efforts to those physicians who belong to any one particular medical group. In this connection, it is interesting to note that a majority

of the applicants in our files have not as yet identified themselves with The American Psychiatric Association. They constitute, therefore, a large reservoir of prospective members for this organization.

The Advisory Committee decided that the Placement Service should also be extended to Canada, and we are working in close cooperation with Dr. John D. Griffin, Medical Director of the Canadian National Committee for Mental Hygiene. We have had a few applications from Canadian psychiatrists for placement in positions or training, and we have seen several in personal interviews when they have visited New York.

The Placement Service has concerned itself exclusively with psychiatrists and physicians interested in psychiatry. It has been the hope of the Advisory Committee that it will be possible at a later date to enlarge the scope of its activities and include the placement of clinical psychologists, psychiatric social workers, and psychiatric nurses, as well as the stimulation of training opportunities in these various fields. If the Placement Service, however, is to expand in this direction, extra funds will be needed. The addition of trained personnel representing each of the groups mentioned, plus clerical assistants, to the staff of the Director of the Placement Service will also be required. It is much too early for this at the present time but we should at least be thinking along these lines.

PUBLICITY

Through the Committee on Public Education of the American Psychiatric Association, of which Dr. C. Charles Burlingame is Chairman, the news that the Placement Service had been established was released and given wide publicity. Notices concerning it appeared in all of the leading professional journals, as well as in the official medical bulletins and publications of the Army and Navy. The announcement was also sent to all members of the American Psychiatric Association in the United States and Canada.

The response was excellent, and almost immediately we began to receive applications from numerous physicians seeking placement. Many hospitals in all sections of the United States also listed their vacant positions with us, and asked our help in filling them.

In addition to the above, a statement describing certain aspects of the Placement Service, and the problems that had been encountered, was released to the newspapers for publication on May 2. This was not particularly satisfactory, however, since the material submitted was so condensed by the editors that it was hardly recognizable when published.

ORGANIZATION

With respect to the various problems involved in the management of the office, it is sufficient to state that an organization has been set up which is functioning very smoothly. I should like to point out, however, that a tremendous amount of detailed clerical work is necessary in handling the routine

business of the Placement Service. The office force has so far been able to take care of the rather heavy load and to keep everything current.

PERSONAL INTERVIEWS

One of the most important duties of the Director of the Placement Service is to interview physicians who come to the office seeking information concerning positions and training opportunities in psychiatry. This has kept us quite busy, 225 doctors having consulted us in person. Many of these men, after several years in the Army or Navy, have been somewhat confused as to what course of training they should pursue and the type of position for which their experience best fits them. In some instances, they have not known which way to turn, so to speak. During these interviews, we have discussed their problems with them freely, have given them advice on various personal matters, have answered all sorts of questions pertaining to psychiatry, and have helped them plan and map out their careers in this specialty. Whenever we have felt that an individual was not temperamentally or otherwise adapted to enter the field of psychiatry or continue in it, we have frankly told him so. We have endeavored particularly to direct promising young physicians to the opportunities which await them in our better state hospitals. All of the men we have seen have been most grateful for the time we have spent with them, and they are unanimous in their opinion that the Placement Service fills a great need.

MEETINGS ATTENDED

In conjunction with my duties as Director of the Placement Service, I have attended a number of medical meetings and conferences. During these meetings, the functions of the Placement Service, and what it has to offer, were pointed out to the assembled physicians individually and in groups. Standards and methods of training in psychiatry were discussed at great length. Many physicians who desired to file applications with the Placement Service were interviewed. Most important of all, however, were the talks I had with Superintendents of State Hospitals concerning the difficulties they have experienced in securing medical personnel for their staffs. Indeed, the shortage of doctors in state hospitals throughout the country constitutes a major psychiatric problem which must be solved.

SURVEYS CONDUCTED

In order to have a complete file of the positions and training opportunities available in psychiatry, a survey of the entire field was one of our first undertakings.

Letters were sent to the medical directors of 300 general and State Hospitals, to 340 private mental hospitals, and to 75 Community and Mental Hygiene Clinics. They were asked to indicate on a special form, which we devised for this purpose, the vacant positions on their staffs and the training programs in effect, together with salaries paid, professional

requirements, and certain factual data about the hospital or clinic. The response has been excellent, and very attractive opportunities are almost daily being listed with us.

Letters were also sent to the Deans of 78 Class A medical schools requesting information concerning basic courses, residencies, post-graduate courses, and fellowships in psychiatry, child guidance, and psychosomatic medicine, as well as teaching positions, which might be available. The returns have been slow in coming in. In fact, only one-fourth of the Deans have given us the data asked for.

FOUNDATIONS VISITED

In addition to the above, several foundations located in New York were visited early in the year, the purpose being to secure information as to what they were offering in the way of fellowships in psychiatry, and to stimulate them to increase the number they were supporting. The different aspects of psychiatric education were presented in detail, and the need for more and more fellowships in this field, especially to assist physicians being released from the armed forces, was pointed out. The necessity for establishing and maintaining adequate training programs in state hospitals was also emphasized. All of the foundations were quite receptive, but nothing concrete in the way of commitments was obtained from them. Nevertheless, it was felt that much good was accomplished by the visits, inasmuch as they are now familiar with the problems which psychiatry is currently facing.

TOTAL OPPORTUNITIES AVAILABLE

As a result of the surveys, which we have just mentioned, we now have listed in our files a total of 995 opportunities in psychiatry, of which 769 are positions and 226 are training.

POSITIONS

Approximately three-fourths of the available positions listed in our files are in state hospitals:

Of these, 85 per cent are in the junior and intermediate brackets. The salaries paid in these grades in most hospitals are quite low for the amount of training and experience required. In a few instances, however, the rate of pay is high, with no special qualifications being necessary. Some of the hospitals include full maintenance for the physician and his family in addition to the salary. Others charge a small sum for subsistence and quarters. While providing maintenance adds to the annual income, it is often an undesirable feature. The quarters furnished are frequently inadequate and unattractive, and most physicians with whom we have discussed the matter prefer living on the outside. In many of the states, no provision is made for the maintenance of families of physicians, and the physician himself is required to live in the hospital, with no extra allowances if he does not. He is forced to find and maintain a home for his family in the nearby community, which is often some distance away. This

adds to the acute housing problem which exists throughout the entire country at the present time. It is difficult to see how state hospitals can attract the best men under these circumstances. On the other hand, there are some excellent positions in state hospitals in the higher grades with good salaries and splendid opportunities for professional advancement.

Only one-fourth of the positions listed are in activities outside of state hospitals. A majority of these are in child guidance clinics and private hospitals, while the remainder cover a wide range of possibilities. The pay offered in these positions, in most instances, is adequate, and it is frequently left open, so that the employer may adjust it to the qualifications and experience of the individual.

It should be mentioned that this tabulation does not include the large number of openings in psychiatry with the Veterans Administration. Nor does it represent anywhere near the total number of positions available to psychiatrists throughout the country. It is hoped that in the very near future we shall be able to conduct a much more complete job survey of the entire United States than we have previously attempted.

TRAINING OPPORTUNITIES

Of the training opportunities listed, 65 per cent are residencies in state hospitals.

Although many of our state hospitals are approved for residency by the American Medical Association and the American Board of Psychiatry and Neurology, the training program which they offer is, in many instances, hopelessly inadequate, and the residents receive little or no actual instruction and supervision. This is partly due to the fact that Clinical Directors and Senior Physicians in state hospitals are so bogged down with routine paper work and red tape that they have very little time to devote to teaching, and partly to the attitude of a few Superintendents who show little or no interest in the problem. Then, too, most state hospitals are isolated and have no affiliations with medical schools, general hospitals, or teaching centers. Under these circumstances, state hospitals cannot hope to appeal to young physicians who are interested primarily in obtaining good training in psychiatry. It is this matter of training, or rather a lack of it, which has proved to be our major stumbling block in filling vacancies in state hospitals. It should be emphasized, of course, that many progressive state hospitals do have excellent training programs, and offer unequalled facilities and advantages for acquiring psychiatric knowledge. Residencies in such hospitals are in great demand.

Only 35 percent of the training opportunities in our files are in medical schools and hospitals connected with them. Most of these are fellowships, internships, externships, refresher courses, and post-graduate courses, while residencies are few and far between. In fact, medical schools and their associate hospitals have just about reached the saturation point in terms of the number of residents they can adequately train and supervise.

It should be mentioned that our list of training opportunities is by no means complete, and it does not include residencies with the Veterans Administration. As a matter of fact, the program of training in psychiatry which the Veterans Administration has planned, and which is now in operation in various teaching centers, is gaining momentum almost daily. The Veterans Administration offers the only real hope for providing the necessary psychiatric training for large numbers of physicians.

TOTAL NUMBER OF APPLICATIONS

A total of 751 physicians seeking opportunities in psychiatry have contacted the Placement Service, either by letter or personal interview. Breaking down this figure we find that only 188 of them are interested in obtaining positions, while 563 desire some form of training.

Application forms, designed to give us information as to the background of the individual and the probable date of his release from the service, have been mailed to all physicians who have written in, and 440 of them have been returned.

REQUESTS FOR POSITIONS

Approximately 90 per cent of the applications for positions in our files are for employment outside of state hospitals.

A majority of these requests are for part time work, with demands for opportunities in private practice, positions in child guidance and mental hygiene clinics, and teaching appointments following in close succession.

Only 10 per cent of our applicants are interested in positions in state hospitals, a fact of very serious import.

Practically all of the requests for positions are quite naturally from physicians who were qualified psychiatrists before entering the armed forces. A few, however, have come from physicians who wish to secure a good paying job which offers an opportunity for training at the same time.

REQUESTS FOR TRAINING

Three-fourths of the requests for training we have received are for residencies, with the remaining one-fourth distributed between fellowships, refresher courses, and post-graduate courses in the order named.

The length of time specified for residencies and fellowships is from one to three years, for refresher courses three to four months, and for post-graduate courses eight months to one year.

Approximately 98 per cent of the medical officers who desire training state that they wish to receive it in a medical school or a teaching hospital connected with it. Only 2 percent of them indicate a willingness to accept a residency or any other type of training in a state hospital.

It is interesting to note the branches of psychiatry specified in the requests for training. General neuro-psychiatry is very much in the foreground,

while psychosomatic medicine, psychoanalysis, psychotherapy of the neuroses and psychoneuroses, and child guidance are all strongly emphasized.

A majority of the requests for residencies and fellowships are from younger men who have been exposed to psychiatry in the military services, and who wish to continue in this specialty. A number of these, however, are from physicians who are trained primarily in medicine, but who, through their war experiences, have become interested in entering the field of psychiatry. It should be pointed out that the medical officers in these two groups are several years older on an average than trainees before the war. This means that medical schools, hospitals and teaching centers must waive their requirements as to age and make an exception in the case of veteran physicians accepted for training.

The requests for short refresher courses and for longer post-graduate courses are mostly from physicians who were experienced psychiatrists before the war. They desire either to brush up in the basic sciences in preparation for their examination for certification by the American Board of Psychiatry and Neurology, or they wish to learn of the new developments in the diagnosis and therapy of nervous and mental diseases since they have been in the service. A few of these requests, however, have come from various medical and surgical specialists who are seeking a better understanding of emotional and psychosomatic problems, in order that they might more adequately treat the patients under their care.

A majority of the medical officers who have requested training state that it is necessary for them to receive adequate remuneration along with it. Most of them are married and a good many have children. In other words, they have acquired added responsibilities. They are anxious to finish their training after release from the service, but they are faced with the problem of having to support a family. Unfortunately, the average pay of a residency or fellowship scarcely permits them to do so. Some of these men, therefore, will be lost to psychiatry because of economic reasons. It should be strongly emphasized, however, that the men who are really interested in becoming competent psychiatrists are willing and stand ready to make almost any financial sacrifice, even to the point of digging into their savings, if they can secure top-notch instruction and training. As a matter of fact, many of them have included statements to this effect in their application forms in answer to the question concerning minimum pay acceptable. We should do all we can, therefore, to stimulate the various activities engaged in training to raise the pay of residents and increase the stipends of fellowships.

CORRELATION BETWEEN REQUESTS, JOBS AND TRAINING

Let us now correlate the requests for positions and training in our files with the opportunities for the same which have been listed with us. This reveals the following interesting and significant facts:

1. There are twenty times as many jobs in state hospitals as there are applications for them;

2. There are fifty per cent more applications for positions outside of state hospitals than there are vacancies in extra-mural activities;

3. There are ten times as many approved training residencies available in state hospitals as there are applications for them;

4. There are eighty per cent more requests for training in medical schools and teaching hospitals connected with them than there are training openings available in these facilities.

ROUTINE USED IN PLACEMENT

We shall not describe the routine which we are using in the office in the placement of physicians who have filed applications with us. An endeavor is made to give each applicant exactly what he desires in the way of a position or training. This is obviously impossible in every instance, because there are so many factors involved, and so many variables which must be taken into consideration. Although it may appear simple and easy on the surface, the task of matching requests with opportunities available is actually a very difficult one.

It should be mentioned in passing that the Placement Service does not necessarily recommend or endorse the physicians it refers to various activities. It is left up to the employer or training facility to investigate the qualifications of the applicant, if they consider it necessary. Every attempt is made, however, to refer only those candidates for a particular position or training opportunity who can meet the requirements as laid down.

REFERRALS MADE

In spite of the difficulties encountered, we have made referrals for positions or training opportunities in the case of the 256 physicians who have indicated in their applications that they will be released from the Army or Navy up to July first. We usually give the applicant three possibilities to choose from in each referral. The other 184 physicians whose applications we have on file are still on active duty, and will be separated from the service between July 1, 1946 and January 1, 1947. We have no idea as to when the remaining 311 physicians in our files will be released from the armed forces. These will be handled in due time. In other words, we are now current in our attempts at placement.

RESULTS

In evaluating the results that have been accomplished, it must always be borne in mind that the Placement Service is not prepared to offer the world, and that it has its limitations. There will probably be at all times more requests for positions and training than we can take care of, and we shall always experience difficulty in giving applicants exactly what they desire.

During the little more than four months covered by this report, we have succeeded in placing 20 per cent of the physicians who have filed applications with us, and who have become available for appoint-

ment by virtue of their release from the armed forces. At first glance, this may seem like a small number. It is quite satisfactory, however, especially in view of the fact that most of the positions and training opportunities we have listed are in state hospitals, and since a majority of our applicants are interested only in extra-mural activities. The truth of the matter is that we cannot estimate the results accomplished in terms of the number of physicians we have actually placed. The Placement Service is not an employment agency in any sense of the word. Instead, it functions merely as an aid to placement by informing applicants just where the openings are.

It has already been pointed out that many physicians have been referred to attractive positions, and many have been started off on the right foot, so to speak, in training. In addition, many have been counseled in personal interviews, and we have been instrumental in relieving the frustration and anxieties of many who have sought our advice. We have also discussed personnel problems with various employers, and have suggested improvements in training programs. The accomplishments as a result of these efforts are intangible and cannot be measured objectively. They are nevertheless of great importance. It is very gratifying to report that we have numerous letters on file from applicants and employers both expressing their gratitude for the service we have rendered them.

PROBLEMS TO BE SOLVED

An analysis of the material in the files of the Placement Service indicates the problems to be solved if psychiatry is to make the most of its opportunities. These are:

1. Young physicians are fighting shy of state hospitals. This means that the acute shortage of psychiatrists, which now exists on the staffs of state hospitals, is not likely to be relieved, unless a determined effort is made by all of the states to attract the best calibre of men.

2. Our major difficulty in filling vacant residencies in state hospitals has been the lack of adequate supervision and training which they offer. The standards of training, therefore, now in effect in state hospitals must be improved, and new training programs instituted where none exist.

3. State hospitals must maintain a close liaison and affiliation with the nearest medical schools, wherever it is feasible to do so, and staff physicians should be given an opportunity to undertake post-graduate training at frequent intervals. This will tend to prevent professional stagnation.

4. All state hospitals to be constructed in the

future should be located close to large communities rather than at a distance from centers of population in order to eliminate geographical isolation.

5. The salaries offered by state hospitals must be raised, and more living quarters provided for families. The whole question of maintenance for physicians and permitting them to live on the outside, with extra allowances, if they so elect, should be studied and investigated.

6. More paying positions for psychiatrists in activities outside of state hospitals are needed and must be created.

7. Psychiatry must make and execute effective plans for a vastly increased program of psychiatric education in order to take care of medical officers from the armed forces and other physicians who are currently seeking training appointments. To assist in this undertaking, all state hospitals and all Veterans Administration neuropsychiatric hospitals must be developed into training centers.

8. More teaching facilities for training students in the understanding and treatment of psychoneurotic, psychosomatic, and non-psychotic disorders are particularly needed. This will require the utilization of out-patient departments, as well as the medical and surgical services of general hospitals for training purposes.

9. The number of approved residencies and fellowships in all branches of psychiatry must be increased, and the stipends that go with them made more adequate, in order to meet the needs of veteran physicians with families who wish to complete their training.

10. There is a need for a considerable number of full time review or refresher courses in neuropsychiatry in order to help physicians prepare for their examination for certification by the American Board of Psychiatry and Neurology. These should be given at least twice a year.

CONCLUSION

In conclusion, I should like to express my sincere gratitude to the members of the Advisory Committee who have given so much of their time and thought to the problems of the Placement Service. I wish also to acknowledge my indebtedness to the Medical Director and the Division of Personnel of the National Committee for Mental Hygiene for the valuable assistance they have given me. Finally, it is my privilege to recognize with appreciation the work of the clerical staff in carrying on the routine activities of the Placement Service.

Respectfully submitted,

F. M. HARRISON, M. D.

PSYCHIATRIC PERSONNEL PLACEMENT SERVICE FINANCIAL STATEMENT

December 10, 1945 to April 30, 1946

RECEIPTS

American Psychiatric Association.....	\$3,225.00
Carnegie Corporation	6,450.00

EXPENDITURES

As listed below.....	5,465.56	
Balance, April 30, 1946.....		\$7,434.44

	Budget	Expenses	Budget to date
Salaries			
Dr. Harrison	\$8,000.00	\$3,146.64	\$4,853.36
Mrs. Ziegler	2,000.00	732.48	1,267.52
Mr. Tausend .....	.....	584.00	— 584.00
Travel	2,000.00	363.02	1,636.98
Printing	75.00	38.49	36.51
Postage	100.00	212.48	— 112.48
Office Supplies and Expenses.....	75.00	156.78	— 81.78
Telephone and Telegraph.....	100.00	54.26	45.74
Letter Service and Shipping.....	200.00	139.41	60.59
Equipment	200.00	.....	200.00
Miscellaneous	150.00	38.00	112.00
Totals	\$12,900.00	\$5,465.56	\$7,434.44

\$3,225.00 due from A.P.A. for next two quarters.

REPORT OF THE COMMITTEE ON PSYCHIATRIC
SOCIAL WORK

Since no stated meeting was held in 1945, this report covers in brief summary some of the progress in the area of psychiatric social work during the final period of the war and the subsequent months.

I. Military social work. Through the cooperation of the Surgeon-General's Office with the Joint Committee of the War Services Office of The American Association of Psychiatric Social Workers and the National Committee for Mental Hygiene, much progress can be reported regarding the extension of the designation and use of military psychiatric social workers in the armed forces. Through the efforts of the Executive Secretary of the War Services Office, Mrs. Elizabeth Healy Ross, indoctrination courses were formulated for men and women in the army who were to be identified as psychiatric assistants and whose previous educational training did not qualify them to receive specification No. 263—the classification designated by the Adjutant General's Office for men and women with graduate degrees from schools of social work who have majored in psychiatric social work and/or men and women who were graduates of schools of social work in good standing who have had clinical psychiatric social work experience following their graduation.

II. In the latter part of 1945, the Executive Secretary of the War Services Office was appointed as Consultant to the Veteran's Administration. Following the submission of the Bill HR 4225, the Joint Committee met to consider ways and means of gaining some consideration for social workers to function as an integral part of veteran's medical and hospital service. Conferences were held with

the Veteran's Administration personnel as a result of which the Joint Advisory Committee passed a resolution in October, 1945, recommending a revision of the bill calling for complete hospital and medical service in Veteran's Administration which would include social services.

III. Utilization of military psychiatric social workers and psychiatric aids in the Veteran's Administration. With the establishment of Veteran's Administration facilities for the care of veterans discharged on psychiatric diagnosis, both in-service and out-patient service units have been extended, with the selection of psychiatric social work personnel to be chosen essentially from the group of men and women having served in the armed services under the designation as above. Reports from over the country, coming directly from the men and women who were formerly in the armed services currently employed by Veteran's Administration, indicate a growing enthusiasm of the treatment possibilities in out-patient facilities now being developed.

IV. An article on Psychiatric Social Work in the Army and its Implications for Civilian Social Work, by Brig. Gen. William C. Menninger, Neuro-Psychiatric Consultant Division of the Office of the Surgeon-General. This article was prepared for presentation at the National Conference of Social Work, and covers in complete detail the utilization of military social workers by the Surgeon-General's Office. In this article General Menninger points the way to a more effective utilization of military psychiatric social workers who will return to civilian psychiatric practice in the care of veterans.

V. Influence upon civilian psychiatric social work

practice of the new psychiatric nomenclature. In the fall of 1945, following the publication of the Nomenclature of Psychiatric Diagnosis by the Psychiatric Division of the Surgeon-General's Office, mimeographed copies were sent to the Directors of all the schools of social work in the country in an effort to stimulate broader utilization of these dynamic concepts in the training of social workers. Already many of the schools of social work have included this in their instructional programs of courses in psychiatric social work.

Many pertinent army psychiatric social work papers have been published in various journals of social work. These articles highlight the effective use of the psychiatric social work in the psychiatric teams. The effectiveness of the therapeutic relationships in the treatment of neuro-psychiatric casualties during the war, has done much toward elaborating the effective inclusion into civilian psychiatric social practice of dynamic short-term treatment of the more accessible psychiatric problems.

VI. Closing of the War Services Office of the A.A.P.S.W.—December, 1945. This office which had rendered such outstanding service in cooperation with the Surgeon-General's Office Psychiatric Division, National Red Cross Psychiatric Section, was officially terminated. Funds, however, were made available for the writing of the history of the activities of the office throughout the war period with particular emphasis on the history of the military psychiatric social work done by the Executive Secretary, Mrs. Elizabeth Healy Ross. This history is now in preparation, and will be published in the near future.

VII. Psychiatric Social Work Office—National Committee for Mental Hygiene. At the Executive Committee meeting in February, 1946, the Director submitted a proposal which makes possible the continuation of the psychiatric social work office under the ægis of the National Committee for Mental Hygiene to replace the War Services Office of The American Association of Psychiatric Social Workers. The Joint Committee of the War Service Office and the National Committee for Mental Hygiene submitted a proposal outlining the functional needs for such a service. Action by the committee established the office of Psychiatric Social Work Consultant, who is to be responsible to the Medical Director. This action makes it possible to continue the extension of psychiatric and psychiatric social work activities over the country with sustained emphasis on the raising of standards of training and function of psychiatric social workers in clinical treatment units which include psychiatrists, psychologists and psychiatric social workers.

VIII. Activities of the Mental Health Unit—The Children's Bureau of the United States Department of Labor. Through the efforts of the Joint Post-War Committee and the staff of the Children's Bureau, a statement was prepared regarding the need for mental hygiene for children and youth. Copies of these recommendations were sent to state, health, welfare and education departments, recreation agencies, churches, teacher's colleges and nursery organizations throughout the country,

through the efforts of Miss Elsa Castendyck, Acting Director of the Mental Health Unit of the Children's Bureau.

IX. Reprint Service. Through the action of the members of the Board of the Josiah Macy, Jr., Foundation, a proposal to underwrite the printing of a bibliography on the development and practice of military psychiatric social work was made possible. Copies of this bibliography were forwarded to schools of social work, and to the military psychiatric social workers in the armed forces. The distribution by the Josiah Macy, Jr., Foundation in cooperation with the National Committee for Mental Hygiene of the preprint articles made possible the receipt of the newly published psychiatric material by all of the military psychiatric social workers who were in service.

Through the efforts of the Joint Committee of the War Services Office and the National Committee for Mental Hygiene, a leaflet was prepared indicating the need for more psychiatric social work personnel in the post-war period. This booklet furnished details on training requirements and information regarding schools of social work where training could be obtained. It is interesting to report that at the beginning of the Spring Quarter at the New York School of Social Work, 121 ex-service men were admitted for training. Fifty thousand copies of this leaflet were distributed to the various psychological and psychiatric units in the armed services in an effort to interest more well qualified men and women to seek training in the field of psychiatric social work.

MARION E. KENWOETHY, *Chairman*,
 RUSSELL E. BLAISDELL,
 HELEN P. LANGNER,
 ESTHER L. RICHARDS,
 JOHN M. MURRAY.

REPORT OF THE COMMITTEE ON PSYCHIATRIC STANDARDS AND POLICIES

May 26, 1946.

In the past one hundred years The American Psychiatric Association has assumed the great responsibility of creating policies and standards for the care and treatment of the mentally ill as well as fostering research work for the prevention and treatment of mental diseases. The American Psychiatric Association has followed more or less a conservative approach for such achievement. However, in recent years the Association became cognizant of the fact that the attention of the entire nation was focused upon the need for adequate preventive and curative mental health services for all the people and that there was a definite demand for such hospital and out-patient services within the means of all classes of society.

The American Psychiatric Association recognized the fact that adequate psychiatric service has not been available to the mass of our population. It is very common not to find a psychiatrist within a radius of over one hundred miles. Most of the psychiatrists are located in large cities and in mental

hospitals. Psychiatric service rendered by hospitals and clinics has never been on the same basis as the services of other branches of medicine in general hospitals. It was recognized by the Association that complete reorganization of hospital and out-patient services will be necessary. A uniform requisite for admission of patients to mental hospitals should be considered as vital. Outside of a few the majority of cases should be considered on a voluntary admission basis. Through education, such a procedure will become a rule rather than the exception. The Association felt that state hospitals for mentally ill should be so well planned that the public will accept them on the same basis as general hospitals. It is obvious that such services can be rendered to the people only through a competent staff. A true medical and psychiatric service can be rendered to the patients of our hospitals through competent personnel which cannot be obtained in any state without consideration of salaries of such a personnel. The Council of the society became greatly concerned about the standards related to clinical activities. In the majority of our hospitals the most skillful psychiatrists are relegated to administrative responsibilities while the person to person treatment to our patients was delegated to the younger and less experienced staff members. The Committee on Psychiatric Standards and Policies of the Association felt that The American Psychiatric Association should be organized on such a basis that the service will radiate from its central headquarters to the whole of the United States as well as Canada and other countries of our hemisphere.

MENTAL HOSPITALS SHOULD LEAD THE WAY

Although marked strides have been made in hospitals for mental diseases in the last twenty years, the institutions have not reached the highest ideals and in the past four years have deteriorated considerably due to lack of personnel and equipment. Most of the hospitals in the country should be re-organized and restaffed.

The adequate recognition of psychiatry depends on standards created by mental hospitals and clinics, since all medical services emanate from the hospitals. Every recognized psychiatric hospital should be so well planned that the medical man and the public will accept them, thus public trust and confidence of the medical profession will be established. Such service can be rendered to the people only through a separation of the acutely and subacutely ill, as well as convalescent cases, from the chronic. Approaching this situation very realistically, it was felt that every hospital should assume the responsibility of excellent care and treatment of acutely ill by a competent staff of psychiatrists, well trained graduate male and female nurses and such other aides as are deemed necessary, thus giving the patients a great opportunity for recovery. *The cost for such care should be considered on the same basis as the cost of physically acutely ill in an approved general hospital.* It is also deemed essential to include the cost for

such services in the policies of the "Blue Cross" and other hospital insurance plans. The establishment of such a department in each mental hospital will institute a much greater bond with all general hospitals, medical schools and practicing physicians, thus stimulating a very desirable and badly needed understanding of mental health by the public. It is quite obvious that we are in an especially important era in regard to psychiatry. Never before has there been so much interest among medical men and lay people in psychiatry. Naturally the war and post-war conditions have stimulated this interest to a great extent and men are wanting instruction in psychiatry—men who would like to go into psychiatry, who have had general training in medicine. It is evident that this calls for a new reorganization in our concepts of psychiatric teaching and in the type of service that should be organized in the community. There should be a new integration of state mental hospitals with general hospitals and medical schools.

The committee feels that there should be a psychiatrist on the staff of every general hospital of a certain size, to do consultation work, not only of the traditional psychiatric nature, but also to help with the psychoneuroses and psychosomatic medical cases, both on the surgical and on the medical wards. They should also be available for out-patient work, thus increasing the preventive work. There will be a new type of relationship between the general hospitals and state hospitals. The medical schools should supply men from their staffs to do teaching in state hospitals. This could be in the nature of seminars, discussions of case readings, beside teaching and lectures. The senior men in the state hospitals should receive appointments on the teaching staffs of our medical schools.

The committee hopes also that some time before a degree in medicine was granted, each student would have had to serve some weeks on the staff of a state hospital doing practical clinical work.

At the present time only a very small percentage of the discharged veterans desiring psychiatric training have expressed an interest in training in state hospitals, in spite of the fact that there are many lucrative vacancies on state hospital staffs. If such men were given appointments on a new basis—such as, they could spend half a day at a state hospital, at least a half day two or three times weekly in the out-patient clinic of a general hospital, and perhaps also on the wards of a general hospital, plus receiving regular instruction and supervision by men on the staff of a medical school, we then could develop a new type and standard of psychiatric education in this country.

A new integration between the state hospitals, the general hospitals and the medical schools must be developed if we are going to capitalize on the new interest in psychiatry that has been born as a result of the war.

The Committee on Psychiatric Standards and Policies was inspired by the above cited facts as well as by careful study and consideration of the opinions and thoughts expressed by prominent psychiatrists throughout the United States and Canada.

It had great material for drafting a very practical and adequate plan for future psychiatric services.

The new standards for psychiatric hospitals and out-patient clinics prepared by the committee were approved and adopted by the Council and published in the *AMERICAN JOURNAL OF PSYCHIATRY*, Vol. 102, Sept., 1945. In the opinion of the committee the above standards apply to large state hospitals and not to small institutions, particularly those connected with medical schools. It is obvious that these small teaching centers should be well-staffed and should carry on teaching and research work as well as have high standards of psychiatric care. One cannot expect the above standards exercised literally in such teaching and other small hospitals.

The committee feels that every well thinking administrator of psychiatric hospitals, as well as the vast majority of psychiatrists, will whole-heartedly support this approach of The American Psychiatric Association. However this will not be sufficient to carry out the program for the ideal plan for psychiatric service. It will be necessary for the organized medical profession through its many channels, to induce the public as a whole to become cognizant of the importance of this program and to prepare their representatives to think seriously how to make this program a reality.

The committee is in favor of The American Psychiatric Association assuming its rightful leadership, by taking more positive and aggressive steps for achieving success in its endeavor.

The American public will not consider psychiatry as a legitimate scientific branch of medicine, as long as mental patients are treated in institutions with a cost of a minimum sixty-five cents per capita per diem and a maximum cost of two dollars per capita per diem.

The committee believes The American Psychiatric Association should become more realistic and demand that every state mental hospital consider a minimum of five dollars per capita per diem necessary for the care and treatment of acute, sub-acute and convalescent cases and two dollars and fifty cents per capita per diem for the care of various types of chronic cases.

Respectfully submitted,

M. A. TARUMIANZ, M. D., *Chairman*,
J. FREMONT BATEMAN, M. D.,
GEORGE A. ELLIOTT, M. D.,
CLARENCE B. FARRAR, M. D.,
MALCOLM J. FARRELL, M. D.,
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HOWARD W. POTTER, M. D.,
GILBERT J. RICH, M. D.,
KENNETH J. TILLOTSON, M. D.,
HARRY J. WORTHING, M. D.

ADDENDA TO REPORT OF MAY 26 OF THE COMMITTEE ON STANDARDS AND POLICIES

It is the opinion of this committee in view of the activities of various lay groups that the Association should take immediate and vigorous action as follows:

1. To set forth the actual status of mental hospital care of patients throughout the country.

2. To state the reasons why deficiencies have always existed and have been aggravated by war conditions.

3. The American Psychiatric Association should fully support and take immediate steps to give effect to the last three paragraphs in the report of May 26.

4. This committee urgently requests council to set up machinery as funds become available for the inspection and rating of all mental hospitals; and to bring to the attention of all state authorities deficiencies requiring correction.

5. The committee is also of the opinion that by supporting wholeheartedly the Psychiatric Foundation the aims of psychiatry as outlined will be greatly advanced by the collaboration of lay and professional groups.

6. That The American Psychiatric Association urge general medical and surgical hospitals to include in their plans for development a psychiatric in-patient service. Such publications as "Modern Hospital" should be requested to carry an editorial on this matter in one of their early issues. Furthermore, that the Council of The American Psychiatric Association take the initiative in gaining the cooperation of the American Medical Association and the American Hospital Association in joint support of this recommendation.

7. That the Secretary of The American Psychiatric Association be authorized to send copies of these resolutions to the authorities of each state requesting them to consider the foregoing paragraphs for future improvement of mental hospitals.

REPORT OF COMMITTEE ON PSYCHIATRY IN MEDICAL EDUCATION

To the Council of The American Psychiatric Association:

The most urgent problem in the field of psychiatric education at this moment is that of training psychiatric specialists to meet the need revealed and created by the war. This emergency in psychiatric education occurs at a time when psychiatry itself is in a period of transition. Psycho-dynamic principles and therapeutic methods are beginning to receive the major emphasis in teaching. The content of such teaching is not yet thoroughly crystallized, capable teachers are few, and the methods of satisfactory teaching are still matters for varying experimentation. Your committee does not therefore consider it desirable at this time to specify in detail optimum patterns of specialistic training. Certain general principles may well be stated.

Satisfactory training requires intensive clinical experience, with close supervision and guidance in psycho-therapy. For this purpose the best plan is for resident apprenticeship training in a psychiatric institution with much active teaching and supervision and a broad range of psychotic, psychoneurotic and psychosomatic conditions in adults and children. The minimum acceptable duration of this basic psychiatric training is two years. The number

of training positions of this type has always been small. In the efforts to increase them now consideration must be given to the limitation of staff and case material. To double the number of such residencies without other growth would probably be in error; actual planning in various centers seems to be for a 50% increase. In general, two sorts of compromise appear feasible: (1) at least three months of intensive instruction in all aspects of psychiatry in a medical center to supplement two years' experience in a psychiatric hospital with specialized types of cases, such as state hospitals and veterans hospitals; (2) concurrent combination of such teaching and experience, through division of trainees time, such as four days on the job, two days in teaching center.

The committee recognizes the justice of the complaint that the teaching of psychotherapy in too many instances has not been adequate. Greater emphasis should be placed on psycho-dynamics, seminar discussion of clinical cases, and an opportunity for the student to be present when psychotherapy is being carried out by the instructor. (Visual aids, recording devices, one-way screens, group psychotherapy may be utilized for this purpose.)

Medical schools now have in prospect a period of six months of decreasing undergraduate teaching demands as the present accelerated program is terminated. Your committee recommends that the association urge the deans of medical schools that every possible facility be utilized during this period in order to enlarge the program of graduate teaching in psychiatry. We recognize the needs of the undergraduate students and we do not suggest relaxation in the standards of their program.

Your committee invites attention to the report of the Hershey conference on psychiatric rehabilitation which resulted in nine specific recommendations for the improvement of techniques in dealing with psychoneurotic and psychosomatic disorders and the psychiatric aspects of comprehensive medical care. As a further step towards the realization of this purpose, the Commonwealth Fund which subsidized the Hershey conference is now sponsoring in combination with the State Medical Society of Minnesota and the University a two-weeks' course for the psychiatric orientation and training of the general practitioner which will serve to guide future developments in this direction. This course was given to 25 practitioners the first two weeks of April, 1946, and was an outstanding success. The instructor was oriented to the everyday problems of medical practice with practical emphasis upon the understanding of the emotional factors that work. The course was limited to the understanding of the psychoneurotic and psychosomatic responses and to the understanding of the patient as a living dynamic person involved in disease process. The essential principles stressed were the patient-physician relationship, the value of technique of interview and the rôle of the emotions in the development of personality structure. These fundamental topics were presented by a coordinated teaching team with minimum didactic work (one hour lecture each day), and small and large group seminars. Each student

had an opportunity to study and present individual patients; clinical work with patients proved to be the real backbone of the training program. This successful demonstration as well as the course given in West Virginia indicated that practical and effective psychiatric training of the general practitioner can be accomplished and that active, vigorous follow through of this work should be promulgated by this Association.

Your committee is pleased to note that a psychiatric personnel service has been set up under the joint auspices of The American Psychiatric Association and the National Committee for Mental Hygiene which is designed to survey and create opportunities and facilities for psychiatric training and to aid medical schools and hospitals in securing competent psychiatrists for their staffs.

The enactment of mental health legislation now pending before Congress may considerably increase funds and facilities available for psychiatric training. The Veterans Administration is now effectively completing plans to provide additional training opportunities utilizing the facilities of each teaching center. An excellent 12 weeks' course for this group has already been given at the University of California Medical School under the direction of Dr. Karl Bowman.

We recognize the probability that undergraduate psychiatric education may be somewhat neglected during the preoccupation with the current emergency in graduate training. There are however pertinent lessons from the war period which should be noted and considered for improving undergraduate instruction. There is agreement that the general level of psychiatric education for medical students has been inadequate. War experience has shown the need for teaching psychiatry as a basic medical science for the comprehensive care of all types of illness. The principal criticism of previous psychiatric instruction has often been its static character and the stress on diagnostic labelling in contrast to essential emphasis on dynamics and therapy. The actual steps to remedy those deficiencies inevitably vary with the different medical schools, and your committee does not consider it wise to specify in detail the ideal plan. We consider it necessary nevertheless to point out that certain matters should be covered in the teaching content of the four years' medical course, namely: normal personality functioning, interviewing, method of examination, dynamic-psychopathology, experience as clinical clerks with patients in general medical departments and in pediatric and surgical services as well as, in psychiatric wards and out-patient departments.

The anticipated continuous progress and interest in psychiatric education indicates the need for more intensive activities of this committee. It is recommended to Council that the membership of the Committee on Psychiatry in Medical Education should be increased and that regular quarterly meetings be held. Letters should be sent to the dean of each school outlining the objectives of psychiatric teaching at all levels. Intern training should be more actively promulgated. Standards of curriculum and

the need for better clinical facilities should be presented. All measures should be utilized for the recruitment and strengthening of teaching staffs.

It is recommended to Council that closer liaison should be created with educational committees of other national associations such as the American College of Physicians, Association of American Medical Colleges, American Academy of Pediatrics, etc., so that coordinated programs can be established and strengthened. Likewise there should be a follow through concerning our previous request for representation on the National Board of Medical Examiners.

FRANKLIN G. EBAUGH, M. D.,
JOHN WHITEHORN, M. D.,
JOHN ROMANO, M. D.,
WM. C. PORTER, M. D.,
O. SPURGEON ENGLISH, M. D.

REPORT OF THE COMMITTEE ON PUBLIC EDUCATION

To the Council of The American Psychiatric Association:

With psychiatry continuing to feature prominently in the various realms of public activity, a general interest in the field has been sustained. Psychiatric information released for public consumption has found an attentive audience, and vehicles for public education efforts have been provided in several spheres: contemplated psychiatric legislative action in Congress, psychiatric aspects of rehabilitation procedures, activity within our own professional ranks to establish psychiatry in the reconviction setting, and other psychiatric affairs of general interest.

In the legislative sphere, the proposed legislation formerly known as H.R. 2550, now the National Mental Health Bill, has passed the house, where it is known as H.R. 4512, and is before the Senate as S. 1160.

This suggested national program of neuropsychiatric teaching, research, and service has rightfully aroused interest in psychiatric circles, and although psychiatrists do not unanimously support it, they seem more or less uniformly agreed on it, and from time to time, many have offered constructive criticisms as to details of function under the Bill.

At intervals, factual information regarding the Bill has been distributed by this committee to our State Representatives, and they and members of the Central Committee have continued to urge its passage in some form. Congressmen and other individuals have been contacted, and members of this committee and other officials of the Association have been called to Washington where they testified in favor of the Bill.

Another sphere of activity resulting in better psychiatric services is the reorganization of the Veterans Administration. The policy of the new administration has been to locate veterans hospitals as near as possible to great medical centers on the basis of veterans' needs, instead of on the basis of political patronage.

When the reorganization was publicly attacked by opposing political factions, bringing the matter to

the attention of every citizen interested in seeing that the veterans receive the best in medical care among other benefits, The American Psychiatric Association came forward with unqualified support of the new policies. This committee, under authorization of the Executive Committee, prepared and distributed to all leading newspapers and all professional journals a news release announcing the Association's official stand. Excellent coverage was obtained on the release, and letters of appreciation were received from General Bradley, General Hawley, and Captain Daniel Blain.

Also relating to services for veterans is the committee's work with the Psychiatric Personnel Placement Service, jointly established this past year by The American Psychiatric Association and the National Committee for Mental Hygiene to bring opportunities in the field together with psychiatrists and other interested medical men being discharged from the armed forces.

Nation-wide coverage was obtained by a general news release sent to all newspapers and professional journals, and the committee requested its State Representatives to canvass their own areas for psychiatric opportunities in child guidance clinics, industry, etc., as a supplement to the efforts of the Placement Service, which surveyed all hospitals. The responses received were forwarded to the headquarters of the Placement Service.

In view of the establishment of the Committee on Psychiatric Placement, this committee has foregone further liaison measures between the Association and the National Committee; no formal action has yet been taken by the council on this question, although there has been correspondence between the two organizations from time to time. In addition to requesting the Council to give voice to a decision on a liaison committee between the two organizations, the committee also requests the Council's opinion on possible liaison between the Association and the National Mental Health Foundation, when and if the Council approves of this new organization.

The National Mental Health Foundation, administratively independent of the National Committee, but cooperating with them, has as its avowed objectives better psychiatric care, public education, and legislative recommendations, and has expressed the desire to develop close relationship with all agencies and groups who share its interest in mental health. This committee does not wish to anticipate action of the Council, but requests specific instructions from the Council in regard to the National Mental Health Foundation.

Apropos of influencing the public understanding of psychiatry and psychiatric treatments, much attention has been focused on sensational dramas and distorted impressions of psychiatry, as exemplified in the film, "Shock," recently released by Twentieth Century-Fox. Specifically in regard to "Shock," innumerable written and verbal complaints and protests have been registered with this committee and officials of the Association by psychiatrists and other interested people who foresee the unorthodox activities of the psychiatrist-villain of the show creating a public apprehension toward psychiatric therapy.

This psychiatrist, diabolical and relentless, com-

mits a murder, and then attempts to kill the only witness, a patient of his, with overdoses of insulin. Finally, after many frightening scenes, the murder is discovered, a reputable psychiatrist summoned, and the patient revived with injection of adrenalin and glucose into the vein.

The psychiatric profession feared that the film would so increase apprehension on the part of patients, relatives of patients, adolescent boys and girls, and people in general, that the effective use of shock therapy would be curtailed. The inclination on the part of many members of the medical profession, and particularly psychiatrists, was to protest loudly and publicly to convince the people that the picture is not a reproduction of the legitimate practice of psychiatry, and to demand its removal from the circuit.

However, we were reminded that banning a book in Boston never fails to sky-rocket the sales of that book, and public controversy over "Shock," would probably have been nothing more than good advertising, sending throngs of people to the theater to "see what all the shouting was about." Obviously, the film industry had put thousands of dollars into the production, and nothing we could do would prevent their showing it.

A more sophisticated public relations technique was followed, and it developed that the film was denounced on a technical and moral basis in the *New York Times*, *PM*, and other papers by dramatic critics whose opinions are accepted as unbiased criticism within their legitimate sphere of activity, thus exerting the desired influence without the controversial or self-defensive element. Reported to be a second-rate picture, the film will probably die a natural death.

The point in question is not what to do about the film, "Shock," but how we can avail ourselves of the opportunity to secure better control in the future. Film industries, like the press, are not conducted for public philanthropy, nor for the primary purpose of promoting the medical aims adjudged by the medical profession to be the most appropriate. The film industry accepts only the responsibility of the general acceptability of motion pictures from the standpoint of common decency and basic morality. However, they are disposed to act within the framework of public interest, and as a matter of fact, in this particular instance, a local psychiatrist was consulted, not only before, but during the actual filming of the sets.

Our aim was to show the film industry that they needed more substantial psychiatric advice and guidance, and we feel that exactly that has been accomplished.

We offered to top film officials whatever assistance we can provide in the future toward improving and restricting the portrayal of psychiatric matters within the limits of scientific correctness, without presuming to adopt the rôle of censor. In reply, they sent written acceptance of our committee's proffer of help, expressing their "appreciation of the reasonableness" of our committee's viewpoint, and requesting suggestions as to how they might "go about getting the right kind of counsel in such mat-

ters." All of this has received appropriate attention by this committee.

Further, whether in answer to our protests or not, an article recently published in "Coronet," spotlighted Joseph I. Breen, who enforces the Production Code, and whose job it is to "tidy up the screen plays and superintend the moral values." After a few pages on the maintenance of propriety and morality in films, there was the statement which can be applied to "Shock:" "The Breen office formerly received 75 thousand letters a month complaining that newspapermen, doctors, psychiatrists, or lawyers, for instance, were libelously depicted. Only a handful of protests is received now. This is because of 'compensating moral value.' Breen insists that a producer who shows a bad lawyer must also show a good one; a good doctor for a bad doctor, and so on."

This committee has reported the technique for handling this matter relating to the film, "Shock," not as an isolated instance, but as an example of handling other situations which have existed for the past fifteen years. *We venture to state that the best public relations efforts are the quietest, least obvious, and least controversial in the press. To forego that principle is a pitfall which BEGINNERS IN THE FIELD OF PUBLIC RELATIONS FIND IT DIFFICULT TO AVOID.*

Your committee has not always been successful in avoiding public controversy in the press, but we would like to feel that as the years have passed, we have proven our techniques in quiet, substantial public relations work.

Along the line of influences outside of the profession which endanger the professional standing of psychiatry are those unqualified practitioners posing under feigned degrees and misleading titles, giving advice on emotional problems for a fee. Last brought to the attention of the Council in the interim report of this committee, these "consultants" have been a problem for many years, and have been exposed in the book, "Where Do People Take Their Troubles?"

It was suggested that legislation be urged which would require these people to publish their qualifications, but doubt has since been voiced that the patients would be astute enough to discriminate among good, bad, or indifferent qualifications. There is probably no perfect answer to the problem of controlling these groups, but the committee earnestly requests the Council to take some action in providing direction in this matter.

The committee is pleased to note that it is apparent that psychiatry has passed the peak of extreme statements concerning the psychological devastation of war on veterans, and takes this opportunity to reaffirm its stand of urging demonstrable statements concerning the need for and efficacy of psychiatric services.

An important part of the Association's Annual Meeting this year will deal with psychiatry's part in the reconversion to peace and in the rehabilitation of returning veterans. At the time of writing, the committee is embarking upon a publicity program for the convention, and it is hoped that the publicity

obtained on this and other important aspects of psychiatry to be discussed will contribute toward attaining our public relations objectives.

The public understanding of psychiatric matters was born out of a distorted idea of mental disorders and their treatments, and though it is safe to say that progress has been made in correcting faulty attitudes, psychiatry, by virtue of its characteristics of the "abnormal" and the dramatic, is still susceptible to exploitation by unthinking or uninformed persons.

This committee is convinced that, in the long run, with our continuing to proceed in a dignified manner, conscientiously practicing our specialty on a scientific basis, and particularly with cohesiveness within our own psychiatric group, an increasingly accurate public understanding of psychiatry will be established, and subsequently, psychiatric services will be accepted on the same basis as those of other medical specialties.

Cohesiveness within our group is of such importance that anything we can do to increase the solidarity of our ranks will strengthen our position with the public. It is paramount that we present a united front.

All psychiatric institutions, and particularly state institutions, have always suffered, and the war was nothing less than devastating in knocking down what standards did exist. The small, devoted group working to keep these institutions running certainly cannot be blamed for the low standards of care, and this committee recommends that the membership be advised to refuse to continue as a whipping post for conditions resulting from lack of public support and legislative appropriations.

Psychiatrists are too prone to place themselves on the defensive; it is this committee's opinion that they should instead become militant and objective, pointing out the shortcomings, and by so doing, bring the leadership back into the profession, and place the responsibility for those shortcomings on those who have the money and the power to remedy them. We will place ourselves in the most strategic position if we ourselves are the first to criticize, and the first to state what should be done. We must strike at the legislature and at every other group, to prick their consciences until they are aware of the shortcomings and feel duty-bound to remedy them. The Committee on Public Education urges the Council to go on record as advising the membership accordingly, with recommendations as to the best strategy of battle.

Respectfully submitted,

C. CHARLES BURLINGAME, M. D.,
Chairman,
GEORGE S. STEVENSON, M. D.,
Vice-Chairman,
CHARLES A. RYMER, M. D.,
NEWDIGATE M. OWENSBY, M. D.,
GERALD JAMEISON, M. D.,
HENRY O. COLOMB, M. D.,
MARTIN H. HOFFMAN, M. D.,
GAYLORD P. COON, M. D.,
FRANK H. LUTON, M. D.,
HOWARD R. MASTERS, M. D.

REPORT OF THE SPECIAL COMMITTEE ON REORGANIZATION

(This report, with the exception of the following amendment, was printed in our March, 1946, number (102:694).)

AMENDMENT

In view of the fact that the Program Committee had almost completed its preparation of the Scientific Program for the nineteen forty-six meeting at the time when the Report of the Special Committee was presented to the Council on December eighteenth, nineteen forty-five, the committee decided to amend its recommendations as follows:

1. That with the assistance of the Program Committee a portion of the nineteen forty-six meeting be devoted to ascertaining the reactions of the membership of our Association to the Report of the Special Committee.
2. That insofar as it is practical to do so the meeting of The American Psychiatric Association in nineteen forty-seven be devoted to discussions of the practical problems our members meet in their daily work.
3. That the committee be continued and that it work with the Program Committee in the interests of the practical professional needs of the members of our Association.

KARL MENNINGER, M. D., *Chairman,*
LEO H. BARTEMEIER, M. D.,
A. E. BENNETT, M. D.,
SPAFFORD ACKERLY, M. D.,
THOMAS A. RATLIFF, M. D.

REPORT OF THE SPECIAL COMMITTEE ON PSYCHIATRY IN THE ARMED FORCES

To the Council of The American Psychiatric Association:

Since the last report of this committee for its Council on December 18, 1945, but one meeting has been held, that at the Division of Neuropsychiatry in the Offices of the Surgeon General at Washington, D. C.

At that meeting, Brigadier General William C. Menninger presented a résumé of the major developments that had taken place, since the previous meeting of the committee on the 16th of July, 1945.

It was reported that the School of Army Neuropsychiatry had graduated 1,237 students and was being moved from the Mason General Hospital to Fort Sam Houston, Texas, where it is now operating and it is proposed that the School of Military Neuropsychiatry should include the development of training of clinical psychologists, psychiatric social workers, psychiatric nursing and ward attendants, in addition to the training of psychiatrists and neurologists.

Many of the Bulletins prepared by the Division of Neuropsychiatry on "Clinical Psychology Service," Neuropsychiatry for the General Medical Officer," Psychiatric Social Work," "Psychiatric Testi-

mony "before Court-Martial" and on "Nomenclature" were presented and approved by our committee and our committee were unanimous on the desirability of wide circulation of the Nomenclature and its publication in the American Journal of Psychiatry.

Some time was spent in the discussion concerning the possible screening at the induction centers and the effects of the lowering of accepted standards as they applied to psychiatric cases.

There was also much discussion concerning the need for training more psychiatrists and particularly as applied to physicians who had had psychiatric experience in their military career. It was agreed that a letter based on the information at hand, should be prepared and sent to all presidents of colleges or universities and deans of medical schools, calling to their attention the great need for indoctrination of all medical students in the field of neuropsychiatry; this to be signed by all members of the committee and a copy of this is appended. Answers have been received from all those by whom this letter was received and most cordial response to the needs of increasing indoctrination of all medical students in psychiatry was received from all of them.

It is the feeling of this committee, that this letter has been and will continue to be of significant importance concerning the training of more physicians in psychiatry.

The plans for a military section of The American Psychiatric Association were discussed and endorsed. General Menninger reported on the progress of the Neuropsychiatric history of the war. He stated that he hoped to be released from the Army in July, 1946.

This committee was a temporary one and now it feels its service has been rendered and requests discharge. We cannot conclude this report without paying the highest tribute to the leadership of Brigadier General William C. Menninger and a most able staff of assistants, who accomplished an unbelievably great task, and has advanced Neuropsychiatry to a higher level of efficiency.

Respectfully submitted,

ARTHUR H. RUGGLES, M. D., *Chairman*,
KARL M. BOWMAN, M. D.,
ALAN GREGG, M. D.,
FREDERICK W. PARSONS, M. D.,
EDWARD A. STRECKER, M. D.,
EDWIN G. ZABRISKIE, M. D.

ARMY SERVICE FORCES
OFFICE OF THE SURGEON GENERAL
WASHINGTON 25, D. C.
April 1, 1946

DEAR DR.

We venture to draw your attention to one of the impressions we have received as consultants to the Secretary of War in the Neuropsychiatry Consultants Division of the Surgeon General's Office, since we are convinced that it would be folly to ignore some of the important lessons revealed thus far by the experience of war.

Not only have we needed (and still need) a

far larger number of thoroughly trained psychiatrists, but *all* medical students need better instruction and training in psychiatry than they have been receiving in our medical schools. The majority of physicians were not sufficiently oriented in modern psychiatry. Such training is needed because of all the neuropsychiatric cases diagnosed and treated in the Army, only 7% were psychotic or insane; 93% were not extreme cases but depended for recognition and adequate care upon what the average doctor serving as a medical officer had of psychiatric knowledge and skill. Too often that knowledge and skill were not what might have been expected of well trained doctors.

The mere number of cases calling for psychiatric understanding redoubles the argument for the importance of psychiatry in medical education. The Army recorded over 380,000 medical discharges for neuropsychiatric disorders (mental deficiency, homosexuality, alcoholism, and anti-social reactions) between January 1942 and December 1945. Also, from the induction board examinations 37% of the total rejections were for neuropsychiatric conditions. Perhaps an even more arresting fact—these individuals represented 12% of all candidates examined by induction boards.

On any typical average day of the war, 10 to 15 per cent of the patients in the Army Hospitals were neuropsychiatrics. At the peak, the Army had about 45,000 physicians but only 2,400 were classified as neuropsychiatrists. In fact half of this number were trained by the Army itself to meet an emergency situation. There were only about 1,000 psychiatrists who were commissioned directly from civilian life, of whom less than 500 could be considered to have been mature specialists. In contrast to the exceedingly small number of psychiatrists, the Army had available at peak about 10,000 surgical specialists and 6,000 specialists in internal medicine.

Derived from these percentages is this simple conclusion: the milder forms of mental defect, emotional instability, and neurotic weakness are far more common and a much larger component of illness and incapacity in either military or civilian populations than is reflected by the budgets, the teaching personnel, or the time devoted to psychiatry in our American Medical Schools.

We believe that it is a reasonable course and perhaps a helpful one for us to send you this information in our earnest hope that the importance of psychiatry in the practice of medicine will be given adequate attention by our medical schools.

Yours sincerely,

ARTHUR H. RUGGLES, M. D., *Chairman*,
ALAN GREGG, M. D.,
FREDERICK W. PARSONS, M. D.,
EDWARD A. STRECKER, M. D.,
EDWIN G. ZABRISKIE, M. D.

REPORT OF COMMITTEE ON VETERANS' AFFAIRS

Your Committee on Veterans' Affairs, on the invitation of Dr. Daniel Blain, Acting Assistant Medical Director for Neuropsychiatry, has acted in an

advisory capacity on matters of policy concerning the psychiatric care and treatment of veterans.

Both as a committee as a whole and as individuals we have consulted with Dr. Blain on psychiatric hospital organization; medical, nursing, and ward attendant staffing; graduate psychiatric education of untrained doctors entering the service and the education and training of doctors for psychiatric clinics in the community; improving the professional competence of permanent psychiatric staff in the hospitals; organization of community clinics; the use of individual doctors for psychiatric treatment in those communities where organized clinics do not exist; the aim and content of graduate courses in psychiatry; medical school affiliation; consultant and part time professional assistance; etc.

In each instance in which we have been called on collectively or individually, our counsel and recommendations have been guided by the standards and policies of The American Psychiatric Association.

Respectfully submitted,

HOWARD W. POTTER, M. D., *Chairman*,
EDWIN G. ZABRISKIE, M. D.,
HOWARD K. PETRY, M. D.

REPORT OF THE COMMITTEE ON PROGRAM

When your committee met in New York in mid-December, 1945, to organize the program for the 1946 Annual meeting it was faced with complications that arose primarily out of the following two factors: In the first place, the cancellation of the 1945 meeting that was finally decided upon late in the spring, left us with a fully organized program which meant that we had accepted enough of papers to cover all the sessions. Since then, many additional papers were received and this necessitated a rearrangement and deletion of some papers which had already been accepted by the committee. A certain proportion of the newly received material was actually preferable on the basis of quality but there was an additional consideration that guided us in our decisions. The important changes that came with the cessation of hostilities made it necessary to shift our attention to new psychiatric aspects. Subjects such as veteran rehabilitation and the functions of the Veterans Administration, reconversion in industry, the application of experiences gained in wartime to civilian practice, the U. S. Public Health plans in regard to psychiatric problems and a number of others, had to be given consideration in preference to other problems that had occupied our interests in the last three or four years. We are bringing this to your attention because we wish to emphasize the fact that the failure to accept some papers that were offered and the deletion of other papers that had been previously accepted were not necessarily based on the merits of the papers themselves. In a number of instances the decision was made because of the timeliness of certain problems as contrasted with others. Some of the more important changes that were undertaken this year included such things, for instance, as combining the presentations by the various military services into one half-day program with the main

purpose of bringing out more emphatically an overall survey of the experiences gained during the war and the lessons that were learned that could be applied (a) to civilian psychiatry; (b) to future needs if they come up. A whole half-day session was set aside for a discussion of the plans that the psychiatric department of the Veterans Administration is in the process of organizing at present. It was felt that the Association should be given first-hand information on this subject and a proper orientation in regard to the new developments.

The plan of holding a one-day session for the whole Association that was inaugurated at the 1944 meeting was found to be so successful that we have continued it this year. Part of it is given over to addresses by invited prominent speakers who will bring us points of value from related fields. Another part is to serve the need for a general discussion of the present status of interrelationships within the society and suggestions as to possible new developments in the future.

The program as it stands speaks for itself. It represents both geographically and contentually the interests and activities of the society as a whole according to the best judgment of your committee. How near have we actually come to achieving this goal? Your committee would be grateful for your evaluation and advice in regard to dealing with this problem. Our membership is large and represents not only a variety of geographic sections, but also different orientations, activities, needs and opportunities. The committee feels that the scientific programs of the annual meetings should be dynamically representative of all of these. It is only in this way that participation in the meetings will result in a real exchange of views and stimulation of further progress. To do this, however, it is most essential that the program should represent an adequate picture of what is actually happening wherever psychiatry is practiced. Throughout the country psychiatrists are working on various aspects of the problem of personality disorders. Investigations of vital importance to psychiatry are also being carried on by workers in closely related disciplines, such as medicine in general, physiology, biochemistry, psychology, sociology and anthropology. Furthermore there are other fields of activity which even if not essentially of a scientific nature, are equal in importance to those mentioned. These include such phenomena as major social events, changes in legal concepts, interrelationships within the psychiatric organization or between it and other organizations, etc. All of these activities should find adequate representation in the program, and this should be the primary principle upon which the choice of papers offered by members would be based. The committee should, furthermore, assume a more active rôle and invite presentations on certain subjects whenever it is felt that the material should be brought before the members of the Association. The members of this committee realize that the practical value of this plan would depend largely upon the extent to which information concerning such activities can become readily available to them. It is possible that this can be accomplished through

the utilization of resources now available or that new methods will have to be devised. We hope that the Council, after considering this matter, would give us both their critical evaluation and advice how to implement the plan.

WILLIAM MALAMUD, *Chairman*,
 ROSCOE W. HALL,
 HUGO MELLA,
 T. A. WATTERS,
 MILTON H. ERICKSON,
 D. EWEN CAMERON,
 G. KIRBY COLLIER,
 OSCAR RAEDER,
 WILLIAM C. MENNINGER,
 FRANK J. CURRAN.

REPORT OF THE COMMITTEE ON RESEARCH

The committee has conducted its business, such as it has been, by correspondence this year, due in large part to the difficulties in transportation and the lack of any subject matter cogently needing discussion.

The committee is agreed that under the present set-up there is little that a Research Committee can do, since funds for a secretary and other assistance necessary have never been granted, despite the fact that they have been repeatedly requested. At present research is such an individual matter that the committee has no means of informing itself of what is going on and no means of directing or participating in research.

Our recommendations boil down to two main ones, concerning which the members are in agreement:

1. That such a committee should have professional and full-time workers, who will be able to find out what is going on in research throughout the country; and secondly, by digesting whatever new appears in the literature in those channels not ordinarily coming to the attention of psychiatrists bring the work of fundamental science which is relevant to psychiatry to the attention of research and laboratory workers in psychiatry.

2. That The American Psychiatric Association empower the Committee on Research or the President of the Association to appoint committees which will study and make reports on fundamental research matters. For example, a Committee on Eugenics is essential for psychiatry. The newer therapeutic measures, which bring about more remissions than were formerly had, turn loose in the community people who, if they have defective germ-plasm, are freer to propagate. If there is a hereditary basis to much of mental sickness, then certainly The American Psychiatric Association should be prominent in the work on eugenics.

The newer therapeutic measures should be evaluated from time to time as they appear. Thus, a committee on prefrontal lobotomy, on electroshock, on the use of the barbiturates and the psychological methods associated with their use in the war—to cite a few matters—ought to be appointed to evaluate these methods from time to time. There should

be no long lag between the actual facts and the dissemination of those facts throughout the membership. The personnel of these committees should be, first, men whose interest in the particular type of work has been manifest, and secondly, men who know scientific and statistical methods sufficiently well to analyze and evaluate the claimed results.

Respectfully submitted,

ABRAHAM MYERSON, M. D., *Chairman*,

May 27-31, 1946

REPORT OF THE COMMITTEE ON PSYCHIATRIC NURSING

In making this report of the Committee on Nursing, a brief recapitulation of the report made to the Council in December 1945 would seem to be in order. This report was received and adopted by vote of the Council at that time. One of the major recommendations made was: "Since the value of this work (the nursing project) has been demonstrated, I move that this service be carried on as a permanent part of The American Psychiatric Association with financial assistance from outside sources so long as it is available and when outside financing is not available, funds to be provided by The American Psychiatric Association for this purpose." Another part of the report of major importance recommends that the standard for affiliate courses be restored to a minimum of three months as soon as this is possible for the general hospital schools of nursing. This is in accordance as well with the Committee on Psychiatric Nursing of the National League of Nursing Education.

I think it is well to call to the attention of the Council and the membership at large that the textbook on the training of attendants, of which Mrs. Fitzsimmons is the author and The Macmillan Company are the publishers, will be available according to present information from the publishers in July 1946. It was formerly anticipated that this would be available in May.

There has occurred a development since December of major significance with respect to the work of the nursing project. Briefly, and I will enlarge on this later in the report; Mrs. Fitzsimmons resigned as nursing consultant on February 15, 1946, and her work was taken over by Mrs. Lela S. Anderson on March 1, 1946. The point that I consider of major significance is that the new appointee, Mrs. Anderson, has been able to carry on efficiently from the beginning of her tenure. This is an indication to your chairman that the techniques developed by Mrs. Fitzsimmons in carrying on the work of the project are transferable and not wholly individualistic. I believe this speaks well for the future development and progress in the training of psychiatric nursing personnel and attendant personnel. Naturally Mrs. Anderson will require, and I believe rapidly acquire, personal and geographical orientation.

Mrs. Fitzsimmons' resignation was accepted with regret to allow her to accept the position of Assistant Superintendent of Nurses in charge of psychiatric nursing in the Veterans Administration in

Washington. There is no question of the service she will be able to render in her new position and the rôle that it will be possible for her to play in the advancement of psychiatric nursing in this very important field, and of almost equal importance the stimulation that she can offer in the adequate training of attendants in Veterans' Facilities. Mrs. Lela S. Anderson, her successor as nursing consultant, was chosen after personal interviews with the three members of the Advisory Committee residing in the East, namely Drs. Ruggles, Chambers and Wall. They were unanimous in their choice. Mrs. Anderson for seven and a half years previous to her acceptance of this position had been Supervisor of Nurses and Attendant Training in the State of Virginia Department of Mental Hygiene. She has a bachelor's degree from Columbia University and has done some work toward her master's degree, also at Columbia. She is a graduate of the Highland Hospital and Philadelphia General Hospital Schools of Nursing and has had a long experience in the field of psychiatric nursing in various administrative and teaching capacities. I believe that we were very fortunate in securing her services, and that she was able to take over Mrs. Fitzsimmons' duties after only a two-week interval. Your chairman in accepting Mrs. Fitzsimmons' resignation was apprehensive that a suitable successor could not be found promptly and that the work of the project might suffer a serious setback if a long interval elapsed between the resignation and the new appointment.

Members of the Council may recall that at the Philadelphia meeting your chairman advanced the idea that psychiatric nursing, psychiatric social work, and psychiatric occupational therapy should collaborate closely in any educational program in mental hospitals directed toward nursing and attendant training. The recommendation is now being made to the Council that provision be made by official action of the Council to provide for close collaboration among the chairmen of these three committees. I believe no one will deny that some orientation in these three disciplines is not only desirable but necessary as a part of the training of personnel in any of these three fields. Such orientation cannot be as effective as it should be, without some such arrangement.

Since the termination of the Bolton Act, which occurred in October 1945, there have not been federal funds available for scholarships in graduate nursing education. In psychiatric nursing such scholarships are of fundamental importance, otherwise many excellent psychiatric nurses will be denied the opportunity of graduate work at the university level because they will be unable to finance it personally. Such graduate training is absolutely essential if we are to develop an adequate reservoir of properly qualified nurses as psychiatric instructors and administrators. There is pending at the present time in the Congress, what was originally H. R. 2550 and is now H. R. 4512, a bill to amend the public health service act to aid in the development of more effective methods of prevention, diagnosis, and treatment of mental disorders.

Provision for subsidies to properly qualified persons for further study in this field is made in these two bills. I would ask that the Council communicate with Mr. Priest, who introduced the bill in the House of Representatives, and with committee chairmen to whom the bill has been referred in both House and Senate to make certain that these properly qualified persons will include nurses. There is a very definite possibility if financial assistance cannot be made available from some source for nurses who wish to pursue graduate training in psychiatric nursing, that a number of courses which have been set up at various universities throughout the United States will fold up through lack of candidates. This would be exceedingly regrettable and constitute a retrograde step. If this somewhat pessimistic anticipation should eventuate, an adequate supply of instructors and administrators in psychiatric nursing would be delayed indefinitely.

Your chairman was anxious last year to have the curricular standards in psychiatric nursing originally approved by the Council at the Chicago meeting in 1938 revised and brought up to date. In view of the prevailing uncertainty of last year, this was not done. It now seems, however, that basic training courses for nurses will be restored at the most within two years. It would be regrettable if the basic courses were returned to the level existing previous to the recent emergency, and we as an Association have nothing more recent than 1938 in curricular standards for psychiatric nursing. Consequently it is proposed during this coming year to revise the existing standards, adding emphasis at some points and subtracting it at others, in the light of the past eight years' experience.

During the course of the year several mental hospitals have been accredited by the committee for affiliate courses in psychiatric nursing. In most instances accreditation has been granted on the basis of a two month affiliation to conform with the compression of the basic nursing course which existed during the emergency. It is proposed, however, to advise these schools as soon as it is practically possible that the accreditation will not be continued unless the affiliate period is restored to three months. Many in the Association feel that even three months is too short a period, but it does not seem practically possible throughout the United States and Canada as a whole to require and hope to have a longer period generally accepted by the general hospital schools.

In a previous report your chairman made the observation with regret that the trend in psychiatric nursing seemed to be toward a reduction in basic schools in mental hospitals. It is now possible to give you the actual figures. There are presently 23 active basic schools in mental hospitals in the United States. Twelve of these are in the state of New York, leaving only 11 for the rest of the country. This represents a reduction of 14 such schools in the past two years. Affiliate courses and senior cadet programs have been established in 32 hospitals not previously having such courses. At the present time there are seven states in which no psychiatric experience is available. This is an improvement

over three years ago when there were 14 such states. Five states and the District of Columbia report that all undergraduate students in nursing receive psychiatric nursing experience. I think we can therefore say that there has been decided improvement in this respect since the work of the nursing project was initiated July 1, 1942.

Your chairman wishes to express his appreciation of the sympathetic cooperation which the Council has given to the Committee on Nursing and to him personally. He wishes also to express to the members of the Advisory Committee on Nursing and the whole committee his thanks for their support, encouragement and wise counsel.

Respectfully submitted,

CHARLES P. FITZPATRICK, M. D.,
Chairman,

EMMETT F. HOCTOR, M. D.,
GROSVENOR B. PEARSON, M. D.,
JOSEPH E. BARRETT, M. D.,
KENNETH E. APPEL, M. D.,
ARCHIBALD MCCAUSLAND, M. D.,
WILLIAM L. PATTERSON, M. D.,
JAMES H. WALL, M. D.,
RALPH M. CHAMBERS, M. D.

DELIVERED AT THE WEDNESDAY FORUM ON THE
REORGANIZATION OF THE ASSOCIATION
AT CHICAGO, MAY 1946

All of us, when we join the Association, have expectations as to how far the organization might lend strength and weight to our own aims and anticipations.

Many of us have had the hope that in these days of enormous personal and social change, the Association would constitute one of those powerful forces which are at work in building our future social order. For there is no group anywhere, the members of which have such detailed and profound knowledge of all aspects of human nature.

But the Association has not, and does not, assume that leadership. It is a measure of our own maturity if we can bring ourselves to accept the fact that not only has it not undertaken leadership but that it cannot, not because of inadequacies on the part of those who have directed its policies for these last several decades, but because of its own constitution. These constitutional inadequacies it shares with every other organization which is of continental scope. Within them there is, of necessity, a diversity of interest and of aim which quite precludes the single-minded striking towards a goal which is the essence of leadership. Now wherever you have such diversity within an organization you must proceed by compromise, and compromise is not pioneering leadership.

I have dealt with this point at some length for it has seemed to me that much of the very considerable, the undeniable dissatisfaction which exists concerning the performance of the Association within recent years arises from this misconception concerning the leadership which it can give.

It is important to get clear in our minds what our Association can be expected to do and what it cannot. A lot of energy can be wasted trying to get

an elephant to jump through a hoop. To accept the fact that its very nature prevents it from taking the active part in our times which many of us had hoped that it would, does not mean that one must give up hope that its functioning can be improved. In rapid succession I shall mention certain changes which appear to me to be fundamental to more effective action.

First, certain of the standing committee should be strengthened through the appointment of permanent paid secretaries. I would mention the Committee on Psychiatry in Medical Education. The excellent work which this committee has done can be greatly expanded. The rating of medical schools by the American Medical Association and the American College of Physicians and Surgeons has already been established. There is no reason why The American Psychiatric Association, through its Committee on Medical Education, should not undertake the rating of departments of psychiatry in universities and medical colleges. This is a period of rapid growth of such departments. They, and psychiatry as a whole, could greatly benefit from the establishment by the Committee of Standards necessary for the attainment of a satisfactory rating. A similar function should be undertaken with respect to hospitals possibly through the addition of a permanent paid secretary to the Committee on Standards and Policies.

A third committee which requires reorganization and strengthening is that of Public Education. The Association has consistently underrated the importance of public relations. The task of maintaining these relations at a satisfactory level cannot be undertaken save by those who are especially trained and experienced in the field. A few years ago I had occasion to be a close observer of an attack made upon the mental health department of a large State by its Governor. Our lack of preparation was illuminating and tragic. There was no informed and sympathetic public opinion to which one could turn, the press had been neglected and was indifferent, large public bodies and organizations such as the State Medical Society and the State Welfare Organizations had not been kept in touch with our program. This large task can only be accomplished by the appointment of a full time public relations director.

A reorganized and strengthened committee on Public Relations working together with a committee on Standards and Policies equipped to carry out the inspection and rating of mental hospitals, has awaiting it tasks of fundamental importance in abolishing the abuses which still exist in a minority of those hospitals and in dispelling the fears and misconceptions which persist in the minds of a considerable majority of the population.

Other changes which I feel would benefit the Association are the abolition of the Nominating Committee system which, rightly or wrongly, has given rise to widespread suspicion that it serves to perpetuate cliques and factions in office. I would suggest that a committee be appointed to study and report upon the best methods to elect the officers of the Association.

The Affiliate Societies should be increased in number and the business of the Association sent down at regular intervals to them for discussion and report. In this way the opinion of the membership could be much better obtained than at present.

Finally, I would propose that the financing of this and other expansions of the public work of the Association should not be borne by the membership.

We contribute our experience and our professional abilities. It is reasonable that the public, through philanthropic foundations and through the direct raising of funds which the Association is now undertaking, should finance this work which is directly and clearly in the public interest.

D. EWEN CAMERON. M. D.

CORRESPONDENCE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Authors endeavor to maintain a dignified silence toward unfavorable or even unfair reviews of their books, but when a reviewer uses downright untruths to express his personal spite through a so-called book review fairness should permit an author to ask for a correction. The more so when the false statements are published in so distinguished and influential a periodical as THE AMERICAN JOURNAL OF PSYCHIATRY.

I am referring to a review of my novel, *September Remember*, by Dr. John A. Larson which was published in THE JOURNAL of March, 1946. That review contains the following serious errors of fact:

1. Dr. Larson devotes about a fifth of his space to criticism of the rôle of a character he calls Joe Wales. There is no Joe Wales in *September Remember*, there is a Joe Kelly and there is a Sam Wales. Did Dr. Larson read *September Remember*?

2. Dr. Larson prefaces some of his bitterest criticism by writing, "To quote from the book:" and then does not quote the book in his entire review but quotes—for implied derision—(a) the very favorable review of this novel by Ruth Pine Furniss in *The Book-of-the-Month Club News* of May, 1945, and (b) a statement from the dust jacket of *September Remember* written by the publisher's publicity department. Both statements are enclosed for your verification. Neither was seen by me before the book was printed.

3. Dr. Larson writes, "... the book does not do justice to ... the psychiatrist who is only casually mentioned." Actually the fictional psychiatrist, Dr. Sam Wales, is a prominent character in the novel and many of the book's pages (see especially Chapter 18) stress the author's belief that alcoholics can profit much by psychiatric aid. Did Dr. Larson read *September Remember*?

It seems fair to conclude that in writing his "review" Dr. Larson was motivated by spite against the Alcoholics Anonymous pro-

gram or more probably against one of its advocates in the field of psychiatry. I am confident you will agree that this type of "reviewing" is not worthy of a publication of the high standards of THE AMERICAN JOURNAL OF PSYCHIATRY.

Very truly yours,
ELIOT TAINTOR.

Enclosures:

The May, 1945, *Book-of-the-Month Club News* review by Ruth Pine Furniss of *September Remember*.

The dust jacket of the same novel with "blurb" written entirely by the publicity staff of Prentice-Hall, Inc.

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In the March 1946 issue of the JOURNAL there appeared a review by Dr. John A. Larson of the book *September Remember*. Except insofar as it speaks favorably of Alcoholics Anonymous, I wish to disavow completely the contents of that review. I am constrained to write as I do because Dr. Larson has used Blythewood as his address and it might seem that his remarks reflect my attitudes when the contrary is the case.

As you know, when you asked me to comment on the book I suggested Dr. Larson's name because the author was a personal friend of mine and I felt that he could give a more objective account of the book than I. He had expressed interest in the subject matter of the novel, a story of a man reclaimed by A. A., and I thought could and would be fair in his discussion.

However, what he has to say is neither objective nor fair, nor even accurate. I hope you will have room to print this letter of disavowal and a letter from the author in which he points out the utter irregularity of what Dr. Larson has written.

Very truly yours,
HARRY M. TIEBOUT, M. D.,
Blythewood,
Greenwich, Conn.

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: The reviewer of the book *September Remember* has received criticism indirectly by the author and a former colleague and has been accused of not having read the book; he must deny this allegation. Unfortunately, he did read the book and has regretted it ever since.

The reviewer must apologize for mixing up the names of the characters but since he had thrown away the copy, it is impossible to correct the technicalities; however, the fact remains that the original criticism is unchanged, that the author solves the problems of two characters, not by psychiatric assistance and by *Alcoholic Anonymous* but by the suicide of the girl involved, then the resultant reunion of the family. The reviewer quoted "from the book." This should have been quoted from the jacket of the book. The reviewer is not hostile to *Alcoholic Anonymous* but feels that the author did not do justice to it, which apparently was the aim of the book, and that it was a sloppy presentation of it.

The reviewer is perplexed at the anxiety displayed by the one who asked him to review the book and has been asked questions as to this individual's personal relationship with the author, friend clinician, etc. He has also been queried as to the identity of the author, whether or not anonymous, and if so, why? Also, the reasons for the author's interest in the questions of alcoholics and *Alcoholic Anonymous*. The reviewer cannot answer these questions. This book is not for a scientific library, does not add to our knowledge of treatment of alcoholics, is confusing and not worth reading by either lay reader or the psychiatrist who is interested in the problem of rehabilitation of alcoholics. For the space given the psychiatrist, the reviewer is disappointed by the apparent futility of his psychotherapeutic efforts as depicted.

JOHN A. LARSON, M. D.

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In a thought-provoking article about methods of "Commitment of the Mentally III" which appeared in the May 1946 issue of the *JOURNAL*, Drs. Overholser and Weihofen pay high tribute to the Lone Star

State, claiming that "Texas is probably the most striking example of the ancient custom of equating the mentally ill person with the criminal" (p. 762). Texas, so it seems to me, has far too many boosters. The prize should be shared with its near-neighbor, Mississippi, or perhaps even awarded to it.

In 1942, I was chief of the NP section at Keesler Field, Miss. At that time, psychotic soldiers whose histories showed evidence of mental disease prior to their induction into the military service, were transferred to state hospitals rather than to veterans' facilities. Like Texas, Mississippi gives custodial care and treatment to the mentally diseased, but only after juries of their peers have convicted them of the crime of being ill.

C.S., one of our patients, came from Mississippi. We were instructed to present him at the court house at such and such a time on such and such a day. In addition, in accordance with telephoned instructions he was handcuffed and accompanied by an armed guard.

We were directed to a basement room that reeked with the odor of stale urine. It was the sheriff, I believe, who greeted us. "That the loon?" was his cheerful yell—and then he went to the 'phone. "Doc," he shouted into it, "the loon's here. C'mon over."

The physician arrived in a few minutes. He seemed earnest and efficient. "You've examined him?" he asked me. "What's the diagnosis?" I told him, he signed the certificate, said "hello" to the patient, and was gone after having spent five minutes at the most breathing in the odor of the room with us.

Next, the sheriff made a series of 'phone calls. "*He's* here," was his almost invariable statement. "He don't look so damn crazy, but he's a loon all right. C'mon over." He then thrust a document into the crook of our patient's flexed left elbow, leaped back and cried, "This here's a subpoena to be in this here court in ten minutes to see if you're as crazy as he" (pointing to me) "says you are. But you don't look like a loon to me. Are you?"

The jury was assembled in less than ten minutes. It resembled nothing so much as a jury in one of the old William S. Hart west-

erns. The patient sat handcuffed next his armed guard in one corner of the room, the sheriff presided in the center at his desk, and the jury lounged against the wall farthest from the "prisoner." Throughout the "trial," two of the jurymen indulged in a fairly loud and vociferous argument about whether the patient looked like a "loon." And throughout the "trial," two others kept rhythmically chewing their tobacco, although the one spittoon was at least ten feet away.

The marksman with the goiter and the torn trousers hit the bull's eye each time, but his rival's aim was poor, probably because of a marked and recurrent left blepharospasm. And unfortunately, at the beginning of the "trial," I was between the jury and their spittoon.

"They say this guy's a loon," the sheriff began. "Any questions you want to ask?" There were—and most were directed at the patient. He maintained a stolid silence. "Can you escape from an insane asylum?" one of the jurors finally asked. He believed he could. A juror told his neighbor that this proved the "prisoner" was crazy—nobody could escape from one of those places. (But our patient did, only a few months later.) "What makes you think he's a loon?" I was asked. "Because the army needs all the men

it can get," I answered, "and it needs them badly. Yet it thinks this soldier should be in a state hospital. That proves it." It did.

The wise policy of the state was upheld. The "prisoner" was adjudged "guilty" and sent to a cell to await transfer to the state hospital. As Drs. Overholser and Weihofen state (p. 768), "it is a precious heritage that gives us the right to insist that a man be served with notice of the pendency of any legal action in which his rights may be affected, and have opportunity to present, confront and cross-examine those who give testimony against him, and introduce any testimony he may have in his own defense," even though he be psychotic and handcuffed, and have an armed guard watching over his every move.

It was in 1942, in Gulfport, Miss., that this "trial" was held. Let's therefore give Mississippi the credit it deserves. It obviously is either the peer or the superior of Texas as "probably the most striking example of the ancient custom of equating the mentally ill person with the criminal." And it should be recognized as such.

Sincerely,

HAROLD ROSEN, M. D.
The Henry Phipps Psychiatric Clinic,
Baltimore, Md.

COMMENT

THE NATIONAL SOCIETY FOR MEDICAL RESEARCH

This Society, a clearing house for information on medical studies and discoveries, has been organized under the sponsorship of the Association of American Medical Colleges with the cooperation of 101 national scientific organizations.

Dr. Anton J. Carlson, professor emeritus of physiology at the University of Chicago, has accepted the presidency and Ralph A. Rohweder, 1946 president of the Chicago Junior Association of Commerce and former consultant and editor for the National Safety Council, has been appointed executive secretary. Secretary-treasurer is Dr. A. C. Ivy, head of the department of physiology, Northwestern University.

The Society has as its purpose the advancement of research in medicine, biology, pharmacy, dentistry and veterinary medicine.

Dr. Carlson emphasized that an important function of the Society is to analyze and expose the propaganda of small but highly vocal groups which object to the use of animals in the experiments without which medical science would still be in its infancy. Every year doctors and researchers must take time from their vital duties to defeat legislation proposed by these groups which would hamper or stop the work of the medical profession.

The board of directors contains an imposing list of names representing a wide range of universities and other scientific

bodies. They are: R. B. Allen, University of Illinois; Alfred Blalock, Johns Hopkins University; C. S. Burwell, Harvard University; E. J. Carey, Marquette University; L. R. Chandler, Stanford University; W. C. Davison, Duke University; R. E. Dyer, National Institute of Health; H. S. Gasser, Rockefeller Institute; E. W. Goodpasture, Vanderbilt University; J. G. Hardenbergh, American Veterinary Medical Association; J. C. Hinsey, Cornell University; Victor Johnson, American Medical Association; C. D. Leake, University of Texas; E. M. MacEwen, University of Iowa; W. S. McEllroy, University of Pittsburgh; B. O. Raulston, University of Southern California; A. M. Schwitalla, St. Louis University; Isaac Starr, University of Pennsylvania; E. L. Turner, University of Washington; Floyd S. Winslow, Medical Society, State of New York.

National offices of the Society are at 25 East Washington Street, Chicago 2, Illinois.

The fact that a major activity of the National Society for Medical Research must be to combat the maneuvers of anti-vivisectionists and similar groups is another of the all too numerous painful evidences of the immaturity of a society that engenders such groups, themselves nonproductive, and who strive perversely to obstruct the labors of those endeavoring peacefully to promote human welfare.

THE MEDICAL CENTER FOR CHILDREN, BOSTON

Plans recently completed for extensive expansion and transformation of the Children's Hospital of Boston promise to make of the new institution a unique organization that will provide every type of medical service for infants, children and adolescents in both health and illness.

The trustees are planning to meet the needs of today, to anticipate those of tomorrow and to set a pattern for a pediatric ser-

vice unexcelled anywhere. Clinical, research and educational programs will be combined and the facilities of the Center will be available to pediatric services not only in New England but throughout the country.

New developments will include the *Child Health Service*, which will comprise all aspects of preventive pediatrics to promote healthy growth and development, physical and mental; a *Unit for Adolescents*, which

will devote special attention to the problems and disabilities of this life epoch that are adequately provided for neither in general hospitals for adults nor in special hospitals for children; a *Neurological Institute for Children* in which will be focussed all the work in neurology, neurosurgery and psychiatry of early life, thus filling another gap in the usual health services for children; an *Institute of Pediatric Research* which will include laboratory divisions representing the various medical sciences, and where special techniques applicable to the problems of childhood and adolescence will be available.

The facilities of the Medical Center for Children will be utilized for teaching Harvard Medical School students, for the instruction of graduate physicians whencesoever, and for the specialized training of nurses, physiotherapists, social service workers and technicians.

As it gets under way the new center will greatly enlarge existing facilities. Its scope is extraordinarily wide and its planning looks far ahead. The prospect is that of a complete diagnostic and treatment service for young patients anywhere in this country or from beyond its borders.

DR. CHENEY RETIRES

After thirty-five years in the psychiatric services of the State of New York, Dr Clarence O. Cheney asked to be relieved from active duty in his most recent post, that of medical director of the New York Hospital, Westchester Division, and his retirement became effective July 1, 1946.

For many years Dr. Cheney has been a leading figure in American psychiatry. It will be recalled that during the second decade of this century he and Kopoloff, by careful experimental work, were able to correct a tendency to over-enthusiasm concerning the results of treatment based on the focal infection theory, at that time vigorously promoted. Dr. Cheney's professional connections have been many and he has served on the staffs of various hospitals and clinics throughout the state. Before going to the New York Hospital, Westchester Division, he had been superintendent of the Hudson River State Hospital for five years and for another five years director of the New York State Psychiatric Institute and Hospital. He occupied the chair in psychiatry at Columbia University, and later was professor of clinical psychiatry at the Cornell Medical School. This latter position he will continue to hold and will maintain connection with the New

York Hospital and other institutions as consulting psychiatrist.

Dr. Cheney served five years as secretary of The American Psychiatric Association and in 1935 was elected president of that body. In his presidential address at the annual meeting in 1936, dealing with the past, present and future of American psychiatry, he foresaw that general medicine and psychiatry must continue to draw more closely together and that with increasing infiltration of psychiatric methods into medical practice there might well be a tendency to "decentralization from state hospital care to local general hospitals," and further, "a decreasing tendency to send psychiatric patients immediately to state hospitals, and more of an inclination to care for them in their homes, under private or clinic medical supervision, public health nursing and social service care." The progress toward community psychiatry that Dr. Cheney then envisioned has since been continued and, but for the Hitler regression, would have been much further advanced.

As a tolerant, progressive and withal conservative scientist, Dr. Cheney represents a notable stabilizing influence in contemporary psychiatry.

PRESIDENT HAMILTON HONORED

At the recent commencement exercises at the University of Vermont the honorary degree of Doctor of Science was bestowed upon Dr. Samuel W. Hamilton, President of The American Psychiatric Association. The citation follows:

SAMUEL WARREN HAMILTON

Because you have devoted your professional career to the study of psychiatry and to the advancement of the medical care of the mentally ill; because you have achieved a position of distinction in your chosen profession and promoted its advancement; and because you have brought distinction to your alma mater, we delight to honor you. By virtue of the authority vested in me, I confer upon you the degree of Doctor of Science, *Honoris Causa*, and admit you to all its rights and privileges.

Dr. Hamilton is a native of the Green Mountain State, and it is peculiarly fitting

that the university from which he graduated in 1898 should now in his presidential year pay him this well merited tribute.

It is not necessary here to recall the details of Dr. Hamilton's professional career. The surveys of mental hospital services that he has conducted in all parts of the United States and in Canada have caused him to know and be known by a greater number of the practicing psychiatrists of the continent than has probably been the experience of any other officer of the Association. His authority in hospital planning, organization and administration and in the jurisdictional matters of state control is unquestioned.

The JOURNAL is happy to join in congratulations to Dr. Hamilton upon the honor he has received at the hands of his alma mater.

DR. ADOLF MEYER'S EIGHTIETH BIRTHDAY

Friday, September 13, was the eightieth birthday of Dr. Adolf Meyer. To celebrate this memorable occasion Mrs. Meyer invited to a birthday dinner his former assistants still in Baltimore together with Dr. Ruth E. Fairbank of Mt. Holyoke College, Dr. Alexander Leighton of Washington, D. C. and Mr. Walter Lageman of New York. There were twenty-four at the table and to judge by the laughter from the far corners there were as many stories of the early days of the Phipps Clinic going the rounds there as at Dr. Meyer's end of the table.

Dr. Wendell Muncie acted as master of ceremonies, and brief after dinner speeches

were made by Drs. Leo Kanner, C. H. Rogerson and Alexander Leighton. Dr. Meyer was presented a leather bound volume of personal letters from those present—each a personal evaluation of Dr. Meyer's influence on the writer. A congratulatory cablegram from Dr. Oskar Diethelm, now visiting in Switzerland, was read.

Dr. Meyer was in fine form. Mrs. Meyer's dinner was never surpassed, and the guests were all delighted to participate again in the Birthday Party, which each fall had been the occasion for the first social gathering with the new and old staff members of the clinic.

NEWS AND NOTES

DR. SLEEPER HEADS AUGUSTA STATE HOSPITAL.—Appointment of Dr. Francis H. Sleeper as superintendent of the Augusta (Maine) State Hospital and consultant on hospitals and mental health to the Maine Department of Institutional Service is announced by Harrison C. Greenleaf, Commissioner. Dr. Sleeper, who has resigned as Assistant to the Commissioner of Mental Health in Massachusetts reported for duty September 1, 1946. He succeeds Dr. Forrest C. Tyson, retired.

SCHOOL OF APPLIED PSYCHOANALYSIS.—The New York Psychoanalytic Institute offers courses during the academic year 1946-47 for physicians, obstetricians, pediatricians, dentists, nurses, social workers, psychologists, educators and sociologists. The courses run from Sept. 23 to June 13 and are grouped in trimesters of 12 evenings each. Applications may be made to the Institute at 245 E. 82d. St., New York 28, N. Y.

DR. WALL HEADS NEW YORK HOSPITAL, WESTCHESTER DIVISION.—Dr. James H. Wall has been appointed medical director of the venerable New York Hospital, Westchester Division (formerly Bloomingdale Hospital) to succeed Dr. Clarence O. Cheney who recently retired.

Dr. Wall, a graduate of Jefferson Medical College, Philadelphia, and a diplomate of the American Board of Psychiatry and Neurology, has been on the staff of the New York Hospital since 1929 and assistant medical director since 1936. He had also served as director of the laboratory, as head of the women's department and as psychiatrist to the out-patient department of the Payne Whitney Clinic and is thus well equipped to assume the direction of the hospital.

Dr. Wall is assistant professor of clinical psychiatry at Cornell University Medical College. He assumed his new duties at the New York Hospital, July 1, 1946.

AMERICAN GROUP THERAPY ASSOCIATION.—The annual meeting of the American Group Therapy Association will be held at New York City in January, 1947. The program will include a session on group therapy in private practice; a session on parallel treatment of a group of preschool children with a group of their mothers; also a session on research in group therapy and a report on a training program for workers in group therapy.

Headquarters of the Association: 228 E. 19th St., New York 3, N. Y.

AMERICAN BOOK CENTER FOR WAR DEVASTATED LIBRARIES, INC.—During the war, the libraries of half the world were destroyed by the impact of battle and in the fires of hate and fanaticism. There is an urgent need for their replenishment, *NOW*. The American Book Center for War Devastated Libraries, Inc., has come into being to meet this need. It is a program that is born of the combined interests of library and educational organizations, of government agencies, and of many other official and non-official bodies in the United States.

The American Book Center is collecting and is shipping abroad scholarly books and periodicals which will be useful in research and necessary in the physical, economic, social and industrial rehabilitation and reconstruction of Europe and the Far East. The Center cannot purchase books and periodicals; it must depend upon gifts from individuals, institutions and organizations.

WHAT IS NEEDED: *Scholarly books* published in the last decade in general science and technology, *medicine and the allied sciences*, dentistry, chemistry, physics, biography, the social sciences, the fine arts and fiction of distinction. *Periodicals* in any of the above subjects.

All shipments should be sent prepaid via the cheapest means of transportation to the

American Book Center, c/o The Library of Congress, Washington 25, D. C.

VETERANS ADMINISTRATION MENTAL HEALTH POLICY.—An expanded consultation and treatment program for World War II veterans with service connected psychiatric disabilities has been authorized by Veterans Administration. Deputy administrators of the 13 branch areas have been given permission to establish mental hygiene clinics in any of the agency's 70 regional offices when such additional facilities are rated as "necessary" and the professional staff can be employed within existing personnel ceilings. The mental hygiene clinics will render treatment on an out-patient basis, with emphasis on group therapy.

Thirty-two clinics for mentally sick veterans previously had been authorized for various metropolitan areas and approximately half are now fully staffed and operating. In general the treatment team at the clinic is composed of one psychiatrist, one clinical psychologist and two social workers for each group of 50 patients.

TREATMENT OF EMOTIONALLY DISTURBED CHILDREN, ILLINOIS.—Plans for a new institution in Illinois for the treatment of "Emotionally disturbed children" are presented in a booklet issued by the Illinois Children's Home and Aid Society, Chicago. The emotionally disturbed child is characterized as one "who wears out one foster-house after another and is *persona non grata* in the usual institution because he either disrupts the institution or cannot fit into the normal program."

The committee appointed to draft specifications for the new institution points out that it must serve three purposes—treatment, teaching and research; whereas existing agencies for the most part are not equipped to undertake either research or teaching.

Three departments of the University of Chicago (pediatrics, psychiatry, social service administration) will collaborate in the program, and it is hoped that a suitable site for the proposed institution may be found on the suburban South Side where such col-

laboration can be carried on to the best advantage.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY.—The executive offices of the American Board of Psychiatry and Neurology, Inc., have been moved from Washington, D. C., to 102-110 Second Avenue, Rochester, Minnesota. Dr. Francis J. Braceland, who was recently appointed consulting psychiatrist to the Mayo Clinic, was elected secretary of the American Board at the May meeting in Chicago and has removed to Rochester.

Dr. Braceland succeeds Dr. Walter Freeman, one of the founders of the American Board of Psychiatry and Neurology in 1934 and who had been its secretary since that time.

The next meeting of the Board will be held in New York City, December 16 and 17, 1946. Applications for examination should be sent to the secretary at once. The December meeting is the last opportunity for the consideration of candidates who desire certification upon record.

AMERICAN OCCUPATIONAL THERAPY ASSOCIATION.—The twenty-sixth annual meeting of the American Occupational Therapy Association was held in Chicago, August 10-16, 1946. More than 500 members and guests were in attendance.

This was the first meeting since 1941 and a comprehensive program, occupying a full week, had been prepared to bring together recent developments and current trends in this field. Among the topics receiving special consideration were occupational therapy in the Veterans Administration, programs for tuberculous patients, the future of occupational therapy in the Army and in the U. S. Public Health Service rehabilitation program, graded programs for cardiacs, paraplegics and other organic neurological types. Recreational therapy, music therapy and bibliotherapy were also discussed.

To Miss Doris Beasley and the members of her committee is due great credit for the success of this meeting.

Officers elected for the coming year are:

President: Mrs. Winifred C. Kahmann, Indiana University Medical Center, Indianapolis, Ind. Vice-president: Miss Marjorie Fish, University Extension, Columbia University, New York, N. Y. Board of Management: Miss Beatrice Wade, Associate Professor and Director of Occupational Therapy, College of Medicine, University of Illinois, Chicago, Ill., and Miss Mabel Davis, Chief Occupational Therapist, Craig Colony, Sonyea, N. Y.

OHIO'S MENTAL HEALTH PROGRAM.—At a recent special session of Ohio's 96th General Assembly, the legislature approved, for the remaining six months of 1946, total appropriations of \$3,727,420 for an emergency program for mental health. These funds will provide operating budgets for the newly opened units at Tiffin, Mt. Vernon, Cambridge and Hoover receiving hospital in Cleveland; will permit an 8-hour day for employees in the state institutions; will supplement present expenditures in state institutions to meet in part the increased costs of food, fuel and clothing; and will meet emergency needs for improvements and equipment at Tiffin and Mt. Vernon and other facilities. Since Governor Lausche had requested a total of \$6,205,980 for the mental health program, the amount voted does not provide for a supplemental appropriation for building construction, funds to increase the amounts of food, to improve the diet of mental patients, to raise the salaries of personnel to overcome shortages, to employ additional personnel or to organize mental hygiene clinics in rural areas. A significant and hopeful feature of the special session was the demonstration of wide public support for adequate mental health appropriations.

LOUIS GROSS MEMORIAL LECTURE.—The ninth annual Louis Gross Memorial Lecture will be delivered under the auspices of the Montreal Clinical Society at the Jewish General Hospital, Montreal, on Wednesday, October 23, 1946, at 8.30 p.m., by Dr. Roy R. Grinker, director of the Institute for Psychosomatic and Psychiatric Research and Training of the Michael Reese Hospital,

Chicago. The subject will be "Psychiatric Objectives of our Time."

RESEARCH POSITIONS AT WESTERN STATE (PA.) PSYCHIATRIC INSTITUTE.—Twelve positions for research in psychiatry and related fields at the Western State Psychiatric Institute and Clinic, Pittsburgh, have been authorized by the Department of Welfare of the Commonwealth of Pennsylvania.

These new positions provide for the appointment of properly qualified senior and junior research workers in psychiatry, internal medicine, biochemistry, neuropathology, neurophysiology, and clinical psychology. Several positions (psychology and neurophysiology) are currently filled.

The Institute is the teaching and research hospital of the Pennsylvania mental hospital system which includes twenty-one hospitals and institutions with an average of 40,000 patients. In some instances research at the Institute will be coordinated with teaching at the University; in such cases the applicant for appointment, and his qualifications, must meet also with the approval of the dean of the School of Medicine.

Interested persons may obtain further information by writing to the Director of the Institute, Grosvenor B. Pearson, M.D., O'Hara and DeSoto Streets, Pittsburgh 13, Pennsylvania.

SALMON LECTURES, 1946.—The Salmon Committee on Psychiatry and Mental Hygiene of the New York Academy of Medicine has named Dr. David M. Levy of New York as the Salmon Lecturer for 1946. Dr. Levy's subject is "Excursions in the New Fields of Psychiatry," and his lectures will be given on three successive Wednesday evenings, November 6, 13 and 20, in the New York Academy of Medicine Building, 2 East 103rd Street, New York City. Members of the medical profession and their friends are invited to attend.

MENTAL HYGIENE SOCIETY, HAWAII.—Chairman Vivian Johnson, personnel committee, The Mental Hygiene Society of the Territory of Hawaii, announces that Mrs. Margaret Hackfield, former executive secretary of the Washington Mental Hygiene

Society, has been appointed executive secretary of the Hawaiian Mental Hygiene Society and will soon take up the duties of that office in Honolulu.

ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE.—A joint meeting of the Association for Research in Nervous and Mental Disease and the International League

Against Epilepsy will be held December 13th and 14th at the Waldorf Astoria Hotel in New York City. The subject for discussion will be "Epilepsy."

Correspondence concerning this meeting may be addressed to Thomas E. Bamford, Jr., Secretary, Association for Research in Nervous and Mental Disease, 115 East 82nd Street, New York 28, New York.

BOOK REVIEWS

THE UNKNOWN MURDERER. By *Theodor Reik*.
Translated from the German by *Dr. Katherine Jones*. (New York: Prentice-Hall, Inc., 1945.)

"The Unknown Murderer," consisting of 244 pages with copious bibliographical notes and an index, stresses the need for greater emphasis on understanding the unknown motives of criminals and the extent of their ego involvement as a method of approach for evaluating the psychogenesis of crime.

In the past, crime prevention, punishment and reformation have been concerned in large measure with interest in the collection, interpretation and uses of clues; and in interpreting circumstantial evidence. These are but links in the chain of proof. Their evaluation is often influenced by individual or personal psychic phenomena involving hasty or prejudiced conclusions; and these are based upon psychological or unconscious impressions or "self-evident truths." These often minimize a consideration of true evidence. For example, suspicions against competent evidence may be created by such factors as previous history of crime on the part of the accused, an attitude of silence, or the giving of contradictory testimony.

Upon this, the author remarks that the criminologists' thinking is rarely logical and illustrates by citing what has been called logical errors that are mistaken for the purely intellectual point of view of the observer. In reality these have psychological connections and often influence the fixing of a motive.

The author believes that the correct answer to seven questions will explain every crime. These include "What" has happened? "Where"? "When"? and "Why"? did it occur? "Who" was the victim? "With"? what and the "Way"? it was done? He also believes that the "Way" a thing is done often throws light upon "Who" did it, since it reflects in part the characteristics of a person in action.

The formal criminologist approach, however, is generally through the medium of inanimate or objective clues that tell little unless they become the object of activity of the person sought. Errors in crime detection, in criminologists' procedure and in judgments, tend in the direction of what has long been considered suitable to the deserts of individual criminals. This is illustrated by the following summation of evidence when pronouncing sentence on an accused murderer. Thus "the accused is a cunning, crafty fellow, without scruples, whom one might believe capable of murder."

The author comments on the value of psychoanalysis in courts as follows: "The admission of analysis into court . . . foreshadows bizarre and terrible happenings—a witches' sabbath of commonsense, where the Oedipus complex is used as evidence against the accused, and his unconscious

motives, as a proof of his guilt." He specifically states, "I do not wish for the introduction of psychoanalysis into court," and "The present state of psychoanalysis is neither suited nor competent to solve the question of guilt or innocence."

He anticipates, however, that "changes are bound to take place in penology"; "the result of the new insight we shall have gained from the modern science of psychological processes, which shows that the concept of guilt and innocence are inadequate." In ancient times, the concept of penal law was either absolute guilt or absolute innocence. The individuality of the criminal did not enter into the question. The fact of the deed was decisive and "the doer" was responsible even if he had not willed the deed or had only been an unintentional instrument of it. In the author's opinion, "there is a considerable difference between this point of view and that in which, not only the deed, but also subjective guilt and malicious intent of the doer, is a deciding factor."

W. L. T.

WHAT PEOPLE ARE—A STUDY OF NORMAL YOUNG MEN. By *Clark W. Heath*, in collaboration with *L. Brouha, L. W. Gregory, C. C. Seltzer, F. L. Wells, and W. L. Woods*. (Cambridge: Harvard University Press, 1945.)

This book consists of a review of some of the work that has been done by the Grant study since its inception in 1938. The purpose of this study, to quote the authors, was: "To achieve a more thorough understanding of human behavior characteristics, and to interpret them more precisely and wisely." The subjects of this study were Harvard College sophomores who were selected primarily on the basis of the "soundness" of their adjustment, not only to their specific college activities but life situations in general. The presentation is clear and apparently directs itself primarily to non-specialists in the fields which were investigated. It must be stated, however, that although an attempt is made to use popularly intelligible language and steer clear from technical terms, this is not done at the expense of exactness. Because of the brevity of the presentation, the book itself is actually a review of the work done and must be read *in toto* by those who wish to get an adequate idea of the results and their applicability. All that the present review can give is an indication of the general trends of the study.

The students selected were subjected to the following series of studies: a complete physical examination including a medical history and laboratory tests, physiological observations, psychological tests, anthropometric measurements and finally psychiatric personality evaluation. The main emphasis of the study was on the observation and critical analysis

of data characteristic of adequately adjusting persons rather than a search for and elimination of abnormal features. The results of the psychiatric examination are based upon the observation of personality functions as they were manifested in the every-day life of the subject, and care is taken to record them in terms that are simple but at the same time precise in their relationship to adjustment. On the basis of the material studied, a series of 25 outstanding features was abstracted and the absence or presence of these in the various subjects were recorded. The personalities of the subjects were classified in relationship to these traits into three groups: A, B, and C, the first representing the highest degree of "soundness," the last the lowest, and B, an intermediate group. The physical examination and history follow the usual routine of such examinations, emphasis being placed in the latter upon occurrence of common diseases of childhood and early adolescence, and the former giving an account of the structure and functions of the various organ systems of the body. The physiological examination, which takes up the functions of such systems as the cardiovascular, respiratory, muscular, etc., places emphasis on an evaluation of dynamic adjustment to stress situations rather than simply recording static figures. The anthropometric measurements were mainly concerned with the evaluation of the somato-type with sub-divisions into four groups of strong, moderate, weak and very weak masculine components. The psychological examinations consisted of standardized intelligence measurements in addition to the more elaborate projective tests. The socio-economic study concerned itself with the family background, the milieu, the early home setting and the person's own socio-economic adjustment to date. Since this study was started in 1938 the investigating group has continued to follow the subsequent adjustment of the subjects studied to determine the validity of the conclusions reached in the original survey. In regard to this, it is interesting to note that the large majority of the men studied have subsequently entered military service and this afforded an opportunity of determining how these men have been able to adjust to the stress of military experience.

The author very wisely refrains from using the results of this study as a basis for conclusions in regard to average normal people. It is quite apparent that the material consisted of a group of highly selected individuals and that further work should be done with representatives of other groups so as to widen the scope of the applicability of the findings. The chief value of this work is that the emphasis is correctly placed upon adjustment of the person to a particular type of social setting, rather than the relative degree of abnormal manifestations. Occasionally this tendency is perhaps somewhat overemphasized. As the authors put it, "it was unnecessary to assume gradations from abnormal to normal behaviour" and that "the hypothesis of a continuum between the mentally ill and the normal did not prove to be a sound mode of approach in this study." Whether such a cleavage can be made successfully is a question, and in places in this book the point seems to be a bit forced. An

interesting feature of the study, particularly in the case of the physiological and psychological investigations, is the very wide range of variability that is encountered within the ranks of those normally adjusting young men. It points out in no uncertain terms the fallacy of sticking to rigid limitations in making our evaluations as to who is likely to break down under physical or psychological stress and also indicates the importance of taking into consideration the types of stress to which a given individual is subjected. No matter how well adjusted a person may seem to be he has his vulnerable spots and will obviously adjust less well when the stress situation calls for a particular effort that must be carried by the personality component which is vulnerable. As a starting point in the direction of studying normal persons, this study is of great value. It is true that as one broadens out into other walks of life, some of the standards may have to be revised, and the emphasis shifted in one direction or another. However, here is a pattern which is well worthwhile following, and a contribution which was long needed in the study of human nature.

WILLIAM MALABUD, M. D.,
Worcester State Hospital,
Worcester, Mass.

ALCOHOL, SCIENCE AND SOCIETY: TWENTY-NINE LECTURES WITH DISCUSSIONS AS GIVEN AT THE YALE SCHOOL OF ALCOHOL STUDIES. (New Haven: Quarterly Journal of Studies on Alcohol, 1945.)

The very important knowledge in this new book deals with the basic problems of alcohol, the question of heredity, personality make-up, children of alcoholic parentage and the effects of excessive drinking upon the institution of marriage and the family; also, the metabolism of alcohol, its physiological effects in large and small amounts, and chemical tests for alcohol in the blood; and, the legal aspects of prohibition, analysis of wet and dry propaganda, the philosophy of the temperance movement, the rôle of religious organizations, the fellowship of Alcoholics Anonymous and the various psychiatric and medical methods of therapy.

This volume was written by men who have had a wide experience in the scientific research of the many problems of alcohol and alcoholism. In a chapter on nutrition, Dr. Norman Jolliffe of the New York College of Medicine reminds the reader that he has repeatedly called attention to the fact that certain disturbances observed in chronic alcoholism are not caused directly by alcohol and that they are secondary to nutritional deficiencies that might develop without the use of alcohol. They do develop, however, more frequently during the excessive use of alcohol because this excess interferes with the normal diet. Polyneuropathy (polyneuritis) is caused by deficiency of thiamin or vitamin B₁. In Wernicke's syndrome there is also an acute complete deficiency of vitamin B₁. Pellagra is found in chronic alcoholics; it is a deficiency of niacin and nicotinic acid. The discarded term, encephalopathia alcoholica, was once believed to be

caused by the direct action of alcohol, but now it is known that encephalopathias, even when they occur in alcoholics, are caused by a nicotonic acid deficiency. In Jolliffe's research work on this subject he discusses one particular disease which may be associated with alcohol. It is L  ennec's cirrhosis or "hobnail" liver. This disease may develop in men and women who were never drinkers of alcohol. But the fact remains that it does occur more frequently in very heavy drinkers than in moderate drinkers or abstainers. There are reasons to believe that nutritional deficiencies of some sort are a factor in causing L  ennec's cirrhosis of the liver. It is certain that the pathological changes in this organ are not caused by the direct action of alcohol any more than is the analogous situation, beriberi, but the particular nutritional deficiency at the bottom of the disease has not yet been conclusively demonstrated.

Another chapter is a critical analysis of general expenditures in connection with inebriety. Dr. Benson Y. Landis of Yale University finds that the standards of living of excessive drinkers and their families are without question greatly lowered because of expenditures for alcohol beverages, apart from wage losses due to inebriety. He estimates from national figures of 1940 that excessive drinkers made an average expenditure of \$6 per week per person for alcoholic beverages. And he concludes that since the majority of these alcoholics belong to the lower income classes, the adverse effect of this specific expenditure on the living standards of this population group is evident.

The serious efforts of developing and carrying out a nation-wide program of education, social responsibility and the rehabilitation of the individual alcoholic, as recorded in this book, deserve the support of the entire medical and allied professions.

P. R. VESSIE, M. D.,

Blythewood, Greenwich, Conn.

OUTLINE OF PSYCHIATRIC CASE STUDY. Second Edition. By *Paul William Preu, M. D.* (New York: Paul B. Hoeber Inc., 1943.)

This new edition of a book which has already proven useful to medical students and interns is a primer of psychiatric procedure outlining step by step the technique by which an adequate psychiatric history is taken and recorded, and a psychiatric examination and clinical approach is carried out. This edition contains many revisions as well as new sections, including an outline for the psychiatric case study of the child. Brief reference is made to the place of psychological and social case-work investigations and consultations. Sample charts and suggested forms for the medical history, the physical examination and the nursing record are provided.

A guide and outline such as this is the necessary companion of every new student of psychiatry. Some will be annoyed because it fails to deal adequately with their special point of interest. Others will be impatient at its rather tedious completeness of detail. It would take several hours to complete a psychiatric history and examination if all the suggested questions were asked and all the possible

leads followed to a definite conclusion. As the author points out, however, it is not intended that all the suggested points should be covered in a mechanical way with all patients. An intelligent selection of significant factors must of course be made. A brief index is provided.

J. D. M. GRIFFIN, M. D.,

National Committee for Mental Hygiene (Canada),
Toronto.

EVERYDAY PSYCHIATRY. By *John D. Campbell, M.D.* (Phila.: J. P. Lippincott Co. 1945.)

The author, a Commander in the United States Naval Reserve, has written a book which is intended not as a general textbook in psychiatry, but one which he says "seeks to fill a gap between medicine and psychiatry."

He concludes Chapter I with the statement: "The present volume has two specific purposes; first to describe the borderline mental condition in personality terms so that the physician, medical student or social worker may become acquainted with this psychiatrically important group of people; and, second, to stress the constitutional and physiologic aspects of personality in an attempt to balance the overwhelming influence of the environmental schools."

In the beginning the author states that there are four basic personality traits: intelligence, conscience, emotional reaction, and psychosexual development; and two secondary personality factors which he labels sociability and special modes of adjustment. He claims that the four basic personality traits "are inherited, constitutional and immutable, and are not subject to change by environment, education or training."

Although the book thus starts with extreme emphasis on constitutional factors and states that they are unmodifiable, the author becomes less rigid as he goes along. He does not feel that nothing can be done for such cases, but has devoted considerable space to the re-education and rehabilitation of psychopathic personalities.

The material presented is obviously influenced by the author's war experiences, and his method of study and treatment is in accord with what was practiced in the better naval and military hospitals throughout the country.

The references to the literature show wide reading and general familiarity with the subject. It is unfortunate that the original formulations would seem to limit the author's approach and may possibly prevent readers from continuing on with the book. Aside from this type of classification of personality, which to the reviewer seems to offer nothing of real value, the only other serious criticism would be in the chapter dealing with intelligence. Here we have an implicit reliance upon I.Q. which is hardly in accord with modern psychiatric thought. When we are told that doctors have an I.Q. from 110 to 120, but that story writers, song writers, movie producers and successful admirals and generals have an I.Q. from 130 to 180, we become more skeptical. When we are

finally told that Columbus, Edison, Dickens, Edgar Allen Poe, Hitler and Napoleon had I.Q.'s of 180 or over, it seems difficult to take the discussion seriously. One is also skeptical about accepting a statement such as, "The occupational status of the individual reflects the intelligence and degree of conscience, therefore offers a practical clue to these personality factors."

In the formulation of personality the author claims that emotional reaction is a function of the autonomic system and that psychosexual development is dependent upon the endocrines of the autonomic nervous system. The idea that neither the autonomic nervous system nor the endocrines undergo change or are capable of modification by environmental influence, is hardly in accord with our present medical knowledge.

The reviewer would conclude, therefore, that aside from the formulation of personality and the discussion of intelligence, the book is in keeping with modern psychiatric thought and is well worth perusal.

K. M. B.

THE PSYCHOLOGICAL FRONTIERS OF SOCIETY. By *Abram Kardiner*, with the collaboration of *Ralph Linton*, *Cora du Bois*, and *James West*. (New York: Columbia University Press, 1945.)

The need has been increasingly felt in recent years for a thoroughgoing integration of data, observational techniques, analytic procedures, and explanatory concepts from the fields of anthropology, psychiatry, psychology, and sociology to help us arrive at an understanding of the development of the individual in his culture. This volume by a psychiatrist, with the assistance of sociologists and anthropologists, is an ambitious step in the direction of such cross-disciplinary integration. Using as his major tool the concept of basic personality type, which he has already defined in his earlier writings, the author seeks to examine the usefulness of this concept in predicting individual development, cultural projective systems, and social change. The book is at once a testimonial to the richness of this approach and a guidepost to its hazards.

In so complex and inclusive an undertaking there are inevitably some decisions concerning theoretical framework, research tools, and sources of data which must be made before the analysis can even be started. On these points the author is explicit and consistent. The theoretical framework is psychoanalytic. "The only psychology that can approach these problems with any hope of success is psychoanalysis" (p. 22). The central research tool is the basic personality structure, described as a "group of nuclear constellations in the individual" (p. 24), derived from the individual's early experiences, tending to be similar for different individuals within the same society, and forming the basis for projective systems expressed in religion and folklore. The sources of data from which the basic personality structures are derived and against

which they are later tested are three socio-anthropological studies: the Comanche (based upon the work of Linton), the Alorese (compiled from duBois' *The People of Alor*), and Plainville, U.S.A. (based upon the book by James West). A final chapter, actually a condensation of a forthcoming book, examines the applicability of the concept of basic personality structure to the history of Western civilization.

If he accepts the author's decisions on these points, the reader may also accept the results of the analysis with little difficulty. Take, for example, the 260-page study of the Alorese. Included in these pages are the ethnographer's report of Alorese life, information concerning family attitudes, child-rearing, adult behavior, together with projective material related to myths, legends, dreams, and religion. These are the raw materials from which the psychiatrist, through "psychodynamic analysis," derives the basic personality structure. In this case, early experiences of maternal rejection and lack of affectional ties, plus hints of potential but unexpressed aggression, lead the author to describe the basic Alorese personality as "suspicious, mistrustful, lacking in confidence, with no interest in the outer world" (p. 170).

Having so delineated the basic personality structure, the author next attempts to check on his conjectures through the psychoanalytic study of the biographies of seven Alorese, and through the comparison of blind analyses of 38 Rorschach protocols (by Oberholzer) with the postulated personality types. The limitations of these latter procedures are fully recognized by the author. Certain aspects of the basic Alorese personality type are "confirmed" by the biographical and Rorschach analyses; new aspects of the personality are "revealed," and relationships between personality formation and social configuration are "established." New facts are added from these sources, and the personality pattern synthesized in psychoanalytic terms. "... this is the combination which supplies the crucial information that the integrational series whose projective manifestations we have used as guides were started in the nursing period. Nothing else could account for this particular combination. . . . When the strong tie to the parent is interfered with and there is no introjection of the parental imago, the foundation for an adequate superego is spoiled" (p. 251). If he accepts the author's basic assumptions, then, the reader will be led, through the logically consistent treatment which follows, to accept the author's conclusions.

On the other hand, some readers—among them the reviewer—will certainly question the author's decisions regarding the universal applicability of psychoanalytic theory, regarding the concept of basic personality type, and regarding the technique of analyzing anthropological data. Some readers—among them the reviewer—will therefore question the results of this analysis. The breadth of current experimentation on determinants of personality and the variety of theories offered to explain personality differences demonstrate unequivocally that no

one concept of personality structure can justifiably claim exclusive rights to the explanation of human behavior. In the light of modern learning theory it is altogether possible that the rejected Alorese child, to return to our example, learned through deprivation that basic satisfactions were not provided by certain adults, and that he carried over (generalized) to other adults in his environment attitudes of anticipated frustration, and hence withdrawal. As a matter of fact, in many instances throughout the book (the illustrative case on pp. 17-21, for example, or the concept of "symbolic extension" on p. 39), where the issue of the psychoanalytic versus the learning theory seems joined uncompromisingly, closer inspection might show the difficulty to be largely a semantic one.

Some readers—among them the reviewer—will further question the wisdom of defining the basic personality type for the Alorese in terms which imply its generality, and then selecting as examples for analysis such different personalities as, say, Mangma and Rilpada. Granted that deviation from the "norm" is both expected and instructive, and granted also that practical considerations limit the choice of cases, the question of whether or not the sample of behavior chosen to validate a concept is representative cannot be overlooked. A further objection can be made to Kardiner's use of Rorschach materials to check on the predicted basic personality type: "... once we are told by the Rorschach that certain end results can be identified, it is a relatively easy matter to reconcile them with more basic trends" (p. 245). If later independent observations—either biographical or Rorschach—are to be employed as validating criteria, a rigorously scientific procedure dictates that they should not be used also as a means of re-interpreting the observations which are to be validated.

These criticisms stem largely from differences in theoretical predisposition and from a conviction that, even in dealing with the tremendously rich and often diffuse materials of field study, the researcher is obligated to introduce certain controls into his procedures. The criticisms should not obscure the contributions which this ambitious undertaking makes to the difficult but essential task of interdisciplinary integration. These contributions include the forging of an analytic tool for the understanding of individual personality development, the testing of that tool in a wide variety of culturally different circumstances, a re-emphasis upon and a re-evaluation of the importance of early childhood training in later personality structure, and the extension to the analysis of normal personality development of techniques developed in clinical psychopathology. Each one represents an important step in ordering the closely-related fields of sociology, anthropology, psychiatry, and psychology. But each step is taken along a narrow path, where detours into tempting byways are forbidden by a code of exclusive devotion to psychoanalytic theory.

It has frequently happened that a book written vigorously and consistently from one point of view has stimulated progress in the field as much by

inviting criticism as by positive contribution. In the foreword to this volume one of the authors invites just such opposition by stating that the basic hypothesis underlying this study "impose(s) on those who do not accept it the burden of finding some better explanation of the observed facts" (xii). It is time that challenge was accepted. It is time for persons trained in psychology, psychiatry, and anthropology to assume responsibility for evaluating the usefulness of the many and varied modern theories of personality in accounting for cultural differences in personality. Until this is done, the critical reader will be forced to accept or reject such studies as the present one on the doubtful grounds of internal consistency or emotional preference.

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A ASSISTÊNCIA A PSICOPATAS NO ESTADO DE SÃO PAULO (CARE OF THE MENTALLY ILL IN THE STATE OF SÃO PAULO). By A. C. Pacheco e Silva. (São Paulo, Brazil, 1945.)

The fifteen years during which Dr. Pacheco e Silva served as general director of mental health services for the state of São Paulo (1923 to 1937) witnessed a remarkable expansion in the facilities for the care and treatment of mental patients in the state. The story of this expansion, as well as the previous history of psychiatry in that part of Brazil, are told by Dr. Pacheco e Silva in an interesting brochure replete with illustrations reflecting the development of the various departments and hospital systems under his supervision.

Although the first hospital in São Paulo for the exclusive care of the mentally ill was established in 1852, it was not until 1896, after the appointment of Dr. Francisco Franco da Rocha to the state hospital directorship, that a truly scientific orientation became apparent, with reforms culminating in the creation of the Hospital of Juqueri, made up of the first great Colony-Hospital of Juqueri, and the Central Asylum. These services were augmented from time to time throughout the administration of Dr. da Rocha, who, upon his retirement in 1923, selected Dr. Pacheco e Silva as his successor.

In 1923, Dr. Pacheco e Silva was just on the threshold of his notable career, but he was already imbued with an enormous enthusiasm for psychiatry. Under his administration, scientific research as well as the clinical, administrative and material aspects of state hospital care made tremendous strides. The Laboratory of Biology and Pathological Anatomy was completed and splendidly equipped, and the services of the noted European anatomo-pathologist, Constantino Tretiakoff, were secured. Much original work was accomplished and recorded, particularly in the "Memórias do Hospital de Juqueri," which was succeeded in 1936 by the journal "Arquivos da Assistência a Psicopatas do Estado do São Paulo." The medical library established by Dr. Pacheco e Silva in the Hospital of Juqueri constitutes the most complete

neuropsychiatric collection in Brazil, with a constantly growing catalogue of books and journals. Specialized clinics—surgical, medical, pediatric, ophthalmological, etc.—were set up and a section of radiology was established. Patients with tuberculosis were segregated in an adequate establishment under special care, as were patients with neurosyphilis. Existing installations were expanded and modernized and new pavilions and agricultural colonies were created, always according to the policy of maximum economy consistent with patient comfort. By 1932 the Colonies of Juquerí amounted to six, the most recent of which was established that year on new plans calling for small economical pavilions arranged in semi-circle within pleasant gardens.

The General Directorate of Mental Hospital Care, which was created by law in 1930, embraces four subdivisions—Clinical Psychiatry, the Manicômio Judiciário, the Central Hospital and the Colonies of Juquerí. The Manicômio Judiciário, an autonomous department for the study and treatment of the criminally insane, established in 1933 and considered to be, in organization, one of the world's best, has done much in the development of forensic psychiatry in Brazil.

With these and other improvements, including psychiatric out-patient and mental hygiene clinics, a modern school for abnormal children, the adoption of all the new therapeutic techniques, the state of São Paulo disposes of an excellent psychiatric armamentarium. Further expansion is anticipated, with the creation of regional establishments so as to constitute a series of hospitals at the principal convergence centers of transportation and to eliminate the excessive centralization of patients that now obtains.

Dr. Pacheco e Silva relinquished his post as Director General of the state hospital system of São Paulo in 1937 to become Professor of Clinical Psychiatry at the University of São Paulo Faculty of Medicine and at the Paulist School of Medicine. The present Director General is Dr. Pedro Augusto da Silva, described by Dr. Pacheco e Silva as "one of the most brilliant figures in Paulist psychiatry of the new generation."

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PATIENTS HAVE FAMILIES. By *Henry B. Richardson.* (New York: The Commonwealth Fund, 1945.)

This book was written by an internist in non-technical language for all who are interested in helping sick people to become well.

The text of 408 pages, containing glossary and general index, was the result of a study directed by Dr. Henry B. Richardson and financed by the Josiah Macy Jr. Foundation. The cooperation of the faculties of public health, medicine and psychiatry of Cornell University Medical School, the New York Hospital and its social service department, and the family service and department of

educational nursing of the Community Service Society were necessary to carry out this project. Their goal was the better understanding of the family as a unit of medical care and the implications for treatment.

The breadth of cooperation needed for this study cannot be emphasized too strongly. It is the pattern of medicine for the future. This book shows clearly and with sustained interest how illness, when the time sequence is balanced against the total life picture of the patient, may take on an entirely different interpretation to the original impression gained by casual clinic contact. Treatment of the individual may be useless unless treatment is given to the family. To treat the family as a unit may need all the facilities of a highly organized community service, as shown by this study. To know the personality of the patient is not sufficient. It is essential to know the traits of all who comprise this unit.

This book shows with clarity, rarely exhibited, that apparent disease may be only malfunction of part of that person. Yet that person does not live to himself, but is part of a small constellation of people called the family. His personality affects and is affected by each and all of them, as the family unit is affected by what we commonly think of as environment in its wider sense.

Much is written about psychosomatic medicine—too little about social medicine. This text might be described as a combination of both. It should be prescribed reading for the medical student, nurse and social worker. One would like to see it in the hands of all who practice the art of medicine.

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THE SCIENTIFIC APPROACH TO CHRONIC ALCOHOLISM. (New York: The Research Council on Problems of Alcohol, 1946.)

It is estimated that 6 percent of the United States citizens who use alcoholic beverages become excessive drinkers, and that of these latter, 25 percent become chronic alcoholics; that is, there are some 750,000 chronic alcoholics in the United States. "There are more chronic alcoholics than active cases of tuberculosis. When this fact is considered, and when the almost total lack of hospital facilities is taken into account, it appears that alcoholism is near the top of the list of major public health problems."

The present brochure has been put out by the Research Council on Problems of Alcohol, the pioneer agency in this field. The magnitude of the problem is set forth in startling figures. For example, the cost of alcoholism to society in the year 1940 was estimated at \$13,000,000 for mental hospital care, \$25,000,000 for maintaining drunks in jails, \$175,000,000 as the cost of crime associated with excessive drinking.

In dealing with this problem other countries, rather than the United States, have taken the lead. Sweden had before the war 10 state hospitals devoted exclusively to the treatment of alcoholism.

Switzerland had 20 dispensaries for out-patient service. Holland had a consultation bureau in each of its larger towns.

Beginnings have been made in certain states and New Hampshire, New Jersey, Connecticut and Alabama have established by legislative action special commissions to study alcoholism. Certain cities have also set up such committees or have established clinics for alcoholics, notably Boston, Buffalo, Charleston (West Virginia), Cleveland, Des Moines, New York, Pittsburgh, Rochester and Washington, D. C.

The Research Council on Problems of Alcohol is under the guidance of its President, Dr. A. J. Carlson, Professor Emeritus of Physiology, University of Chicago. The report sets forth remedial measures which must include (1) research; (2) increased hospital and other treatment services; (3) education; (4) industrial and legal controls. Mr. Howard Coonley, former President of the National Association of Manufacturers, states in a foreword "The medical and scientific approach to the problem of alcoholism should go far toward preventing another prohibition fiasco."

C. B. F.

SCIENTIFIC PROOF AND RELATIONS OF LAW AND MEDICINE. Master Index to the Symposium Series. Edited by *Hubert Winston Smith*,

LL.B., M.D. (Urbana: Univ. of Illinois Press. 1946.)

This 26-page brochure indexes the papers in two symposia covering a great variety of topics having relations to both law and medicine. Each paper was published simultaneously in a leading law review and a prominent medical journal. The first symposium was published during 1943, the second in 1946. The purpose was to bring conspicuously to the attention of both doctors and lawyers important issues in which both professions are concerned.

In the first series four medical journals took part—*AMERICAN JOURNAL OF PSYCHIATRY*, *Annals of Internal Medicine*, *Annals of Surgery*, and *Clinics*. Eleven legal journals, representing all parts of the United States collaborated in this series. The second series was expanded somewhat and included six medical and seventeen law journals.

One hundred and ten contributions are listed in the master index. Many of them will be found of especial assistance to trial lawyers, expert witnesses and the courts in dealing with personal injury litigation, the problems of expert testimony and other medico-legal issues.

Dr. Smith, who is professor of legal medicine in the University of Illinois, has rendered distinguished service to the medical and legal professions in bringing to publication the mass of valuable reference material represented by this index.

C. B. F.

IN MEMORIAM

JACOB S. KASANIN

1897-1946

Dr. Jacob S. Kasanin died of a cerebral hemorrhage on May 4, 1946. Although he had been ailing at times during recent years, he had been actively engaged in his psychiatric work and had planned to attend the 1946 meeting of The American Psychiatric Association, where he was scheduled to present a paper. His death came as a great shock to his many friends and his family. He is survived by his wife and three children.

He was born in Russia in 1897. During his childhood his family moved to Manchuria, and he came to this country in 1915. He obtained his B. S. degree in 1919 and his M. D. degree in 1921 from the University of Michigan. He received his basic psychiatric training at the Boston State Hospital and the Boston Psychopathic Hospital and his neurologic training at the Mount Sinai Hospital in New York. He obtained an M. S. degree in public health in 1926. He served as director of mental hygiene for the Jewish Charities of Boston from 1927 to 1928 and as senior research associate at the Boston Psychopathic Hospital from 1927 to 1931. Following this he became clinical director of the State Hospital for Mental Diseases at Howard, R. I. From 1936 to 1939 he was director of the psychiatric department of the Michael Reese Hospital in Chicago. In 1939 he went to San Francisco, where he organized and developed the psychiatric department of the Mount Zion Hospital. He was assistant clinical professor of psychiatry at the University of California Medical School.

Dr. Kasanin brought to psychiatry a keen and inquiring mind, enthusiasm and a constructive approach to psychiatric problems unburdened by dogmatic or hidebound thinking. He had an abundance of energy, which he used unsparingly in all his undertakings. His psychiatric interests were broad, and he made many important contributions to the literature, including two monographs in collaboration with others on "Conceptual Thinking in Schizophrenia" and "Language and Thought in Schizophrenia." He was active in teaching and in social aspects of psychiatry, doing pioneer work in mental hygiene in the San Francisco area. During the war years he also pioneered in providing out-patient facilities for veterans, and he was psychiatric consultant to the 9th Service Command.

His psychiatric attainments were widely recognized. He served as president of the American Orthopsychiatric Association in 1941-42.

Possessing an outgoing and colorful personality, Dr. Kasanin had a great capacity for making friends wherever he went and for keeping them. He was a stimulating and genial companion, whose zest was infectious and whose wit was always good natured. Though unconventional and often outspoken, he was essentially a tolerant and considerate person. He will be sadly missed, not only for his cheery presence but also for his solid contributions to American psychiatry.

DAVID ROTHSCHILD, M. D.,
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THE AMERICAN JOURNAL OF PSYCHIATRY

A HISTORY OF THE DEVELOPMENT OF THE CONCEPT OF FUNCTIONAL NERVOUS DISEASE DURING THE PAST TWENTY-FIVE HUNDRED YEARS

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Since the dawn of history the relation between the viscera and one's emotional life—that is, the soma and the psyche—appears to have been recognized and has become a part of the wisdom of the ages. It may properly be called folklore and, while not mentioned in Frazer's *The Golden Bough* (1) or Sumner's *Folkways* (2), it has a definite place in the Old Testament. The concepts are primitive and yet very definite. For instance, in the Book of Genesis, supposedly one of the early books of the Bible, the expression is used "the bowels yearn," implying the relation between the bowels and states of feeling. Likewise, "the belly trembles" in certain forms of excitement. Again, a person feels as if there was "an east wind in his belly." "The heart aches" and "the heart longs," and "the breath is taken away" with excitement. Long before science had noted any such relation, the people had observed it.

In conventional language there are repeated evidences scattered throughout history. One has but to look at the valentine with the picture of Cupid shooting his arrow through the heart to recognize the proverbial relationship between concepts of love and the organ, the heart. By the time of the great period of Greek learning this had become well established in thought and expressed in literature. It had developed beyond the very primitive concept of the Bible and was actually concerned with the various organs.

There appears to have been no word in the Greek language identical with the word "emotion" and Gardiner (3) doubts if there was any such concept in Greek thought. However, the use of the word "motion" and its application indicates very clearly the recognition of the relationship between the emotional life of the individual and action of the viscera. Just when the words "hypochondria," "melancholia" and "hysteria" had

their origin is not certain, but they obviously are derived from the Greeks. I shall not attempt to conduct a philological research, but it is apparent that in common speech characterizations of people as "spleeny," having "no guts," "heartsick" are all indicative of the recognition of this relationship. Furthermore, the association of such relationship with certain states of mind and with certain types of personality forms an integral part of vulgarisms since such were fully recorded. Certainly the man in the street has thought since the dawn of history that courage emanated from the abdominal cavity and that lack of courage was associated with certain visceral changes. So enlightened a man as Herbert Spencer (4) in his *Study of Sociology*, in speaking of "Dutch courage," attributed the phrase to the fact that brandy stimulates the circulation and so causes great courage. He also states that a fact well known to a medical man is that heart disease brings on timidity. It would be interesting to collect the almost infinite number of references to states of feeling or types of personality associated or identified with certain organs.

Gardiner, Metcalf and Beebe-Center (3) give an excellent review of Greek thought in these matters. Pleasure is a motion, and—

... in the *Timaeus* these and similar perturbations are connected in the spirit, and doubtless under the influence of Hippocrates, with organic disturbances, particularly in the heart, the lungs, the liver and the various fluids and more mobile substances of the body. Thus the heart, excited by the vital heat, palpitates in fear and is turgid in anger; for which reason, says Plato, the gods placed about the heart the soft, bloodless and spongy lungs in order that, when passion was rife, the heart might beat against a yielding body and get cooled. In unregulated appetite the bitter gall is diffused through the liver. . . . Again, infinite varieties of ill-temper, melancholy, rashness and cowardice, as well as of disturbances in the in-

tellectual functions, are produced by the wandering through the body of "acid and briny phlegm and other bitter and bilious humors."

That is, it is physiological. A long list of visceral responses to fear and rage are ascribed to heat and cold.

HIPPOCRATES

Throughout the entire period under study one finds Hippocrates quoted; yet in the translation of the genuine works of Hippocrates by Francis Adams(5), one finds disappointingly little. There are a few references to hysteria, but hypochondria does not appear in the index, nor is it to be found in the text. Globus hystericus is mentioned and Adams states that he does not remember to have met with the term in any of the ancient medical works except in the Hippocratic treatises. Under *Diseases of Women* a long description of hysterical convulsions is found. These convulsions are said to have attacked principally antiquated maids and widows. It is remarked that hysterical complaints bring on cough and other pectoral symptoms. In *Complaints of Young Women* it is obvious that evidences of functional nervous disease were thought to be due to uterine suffocation. In the section on *The Glands* are found some striking remarks on the sympathy between the mammæ and the uterus, illustrating the use of the concept of sympathy at that time. Under *Regimen in Acute Diseases* it is stated that if you pinch a patient with your fingers and he feels it, it is hysterical, but if the patient does not feel it, then it is a convulsion. Under *Aphorisms*, sneezing is mentioned in a woman affected with hysterics. This, and no more, is to be found. However from collateral philosophical writings it appears that about this period the Greeks thought of the uterus as a little animal running around in the body and producing various hysterical symptoms, and thus the word, hysteria. The whole matter of Greek medicine is somewhat ephemeral and it does not seem too extravagant a statement to say that the inclination is to attribute all the medical knowledge prior to Galen to Hippocrates.

GALEN

Galen, living in the first century, is said to have published 500 medical treatises and,

as is well known, became the great authority for 1500 years. As late as 1559, in London, Dr. Geynes was cited before the College for impugning the infallibility of Galen. In his *Notes on Hippocrates' "Concerning Humors"* Galen(6) says:

The majority, not only of physicians, but of philosophers, have named the part given by nature to women for the purpose of child bearing, the womb (*μήτρα*). I have seen on the one hand many hysterical women, some of them lying deprived of sensation and motion, with the pulse small and indistinct, or even no pulse at all, and on the other hand some with sensation, motion and reasoning powers unaffected, but scarcely breathing. Other had contractions of the limbs. There are many differences in the symptoms of hysteria practically all of which I discussed in the sixth book on the "affected parts." It is believable that these hysterical conditions take place in women owing to retention of the catamenia or the sperm; but the retention of the sperm appears to do more harm to the body than that of the catamenia, in those bodies in which the humors are corrupt and the life more inactive, and indulgence in sexual intercourse previously more frequent, and abstinence afterwards complete. These hysterical symptoms are believed to be rooted in the uterus and some consider that the womb is an organism which yearns for child bearing, and for this reason when deprived of what it desires, injures the whole body. They say that this is indicated by Plato in that sentence in which he makes the following statement, "What is called the womb or uterus in women is a living thing which longs for child bearing, and when it is fruitless long past its season, endures it painfully and with difficulty and wanders everywhere throughout the body, and shuts off the outlets of the breath, prevents breathing, puts the patient into the greatest difficulties and brings on all kinds of diseases." But we must realize as has been elsewhere shown, that the uterus is not an animal, and does not wander about, but is drawn upward and to one side, because it is filled with air, increases in width, decreases in length, and for this reason is drawn upward.

Then in *On the Places Affected by Disease* he says:

Plato gave the name hysterical to the symptoms on the part of the nervous system, in widows or women who have long been without sexual intercourse. Hystera is the Greek word for the uterus. "The so-called uteri in women are a living animal inside [the woman] desirous of child bearing. When it is without fruit a long time after puberty it endures it protestingly, wanders about in the body and shuts off the respiratory passages."

Galen also treats of the so-called "hysterical suffocation" or "absence of respiration," terms used by physicians for the same dis-

ease. There follows a description of hysterical women. He continues:

It is agreed that this disease occurs in women who have been long widowed, who have previously had regular menstruation and borne children, and have been deprived by widowhood of regular sexual intercourse with their husbands. What could be more probable than the belief that these hysterical conditions so-called are due to retention of the catamenia or the semen whether they show themselves as absence of respiration or suffocations, or contractions of the limbs. Women need to get rid of their semen as much as men do. Abstinence, even in the young, produces heaviness of the head, nausea and feverishness, loss of appetite and indigestion. Those who enforce continence upon themselves, become slow of sensation and motion, some of them scowling and depressed as in melancholia. Sudden stopping of the habit after frequent use, as in mourning, produces this effect more generally and completely. Cases are cited in support of this. Widows and virgins with suppressed menstruation suffer from the varying symptoms of hysteria; widows even whose menstruation is not affected suffer from retention of the semen. In these women midwives sometimes find the uterus retroverted or tipped to one side as shown by the obliquity of the cervix, so that it cannot receive the semen and perform the function of which it is so desirous, and so does injury to the whole body.

CELSUS

Celsus(7), whether a great physician or a great writer, was of about the same period, and has this to say:

From the womb of a woman, also, there arises a violent malady; and next to the stomach this organ is affected the most by the body, and has the most influence upon it. At times it makes the woman so insensible that it prostrates her as if by epilepsy. The case, however, differs from epilepsy, in that the eyes are not turned nor is there foaming at the mouth nor spasm of sinews; there is merely stupor. In some women this attack recurs at frequent intervals and lasts throughout life. When this happens, if there is sufficient strength, blood-letting is beneficial; if too little, yet cups should be applied to the groins. If she lies prostrate for a long while, or if she had done so at other times, hold to her nostrils an extinguished lamp wick, or some other of these materials which I have referred to as having a specially foetid odour, to arouse the woman. For the same end, affusion with cold water is also effectual. And there is benefit from rue pounded up in honey, or from a wax-salve made up with cyprus oil or from hot moist plasters of some sort applied to the external genitals as far as the pubes. At the same time also the hips and the backs of the knees should be rubbed. Then when she has come to herself, she should be cut off from wine for a whole year,

even if a similar attack does not recur. Friction should be applied daily to the whole body, but partially to the abdomen and behind the knees. Food of the middle class should be given: every third or fourth day mustard is to be applied over the hypogastrium until the skin is reddened. If induration persists, a convenient emollient appears to be bitter-sweet steeped in milk, then pounded and mixed with white wax and deer marrow in iris oil, or suet of beef or goat mixed with rose oil. Also there should be given in draught either castory, or git or dill. If the womb is not healthy, it is cleaned with square rushes; but if it is actually ulcerated a wax-salve is made with rose oil, mixed with fresh lard and white of egg, and applied to it, or else white of egg mixed with rose oil, with pounded rose-leaves added to give it consistence. When painful the womb should be fumigated from below with sulphur. But if excessive menstruation is doing harm to the woman, the remedy is to scarify and cup the groins, or even to apply cups under the breasts. If the menstrual discharge is bad, the following medicaments are to be applied to evoke blood, costmary, pennyroyal, white violet, parsley, catmint and savory and hyssop. Let her include what is suitable in her diet: leeks, rue, cummin, onion, mustard, or any other acrid vegetable. If blood bursts out from the nose at a time when it should do so from the genitals, the groins are to be scarified and cupped, repeating this every thirtieth day for three or four months, then you may be sure that there are pains coming in the head. Then blood is to be let from the arms, and you have given relief at once. . . . White olives also produce the same effect, also black poppy seeds, taken with honey, and liquid gum, mixed with pounded celery seeds, and given in a cupful of raisin wine. Besides the above, draughts suited for all bladder pains are made from aromatics, such as spikenard, saffron, cinnamon, cassia, and such like, also decoction of mastic does good. If in spite of these pain becomes intolerable and there is blood in the urine, venesection is proper, or at any rate wet cupping over the hips. If a woman is liable to fits owing to genital disease, snails are to be burnt with their shells, and pounded up together; then honey added to them.

The next 1500 years yields very little that is new. This was a period when thought was dominated by theologians. According to Gardiner(3):

As was to be expected, we find nothing original in the Fathers on the physiology of emotion, although the subject occasionally engages their attention. Nemesius, *e.g.*, accepts from Galen the opinion that the seat of grief is in the orifice of the stomach. Lactantius records that anger was assigned by some to the gall-bladder, fear to the heart, joy to the spleen, and sexual pleasures to the liver, but prudently refrains from expressing an opinion of his own, considering the whole matter too obscure to admit of any settled conclusion. Probably the most interesting deliver-

ance on this subject in the Patristic period is found in Gregory of Nyssa (331-394). In criticizing the doctrine that the soul is seated in the heart, he mentions as the principal support for this view the affection of the heart in emotion. But the best medical opinion, he says, is that the affection of the heart in emotion is secondary and derived and that the primary phenomenon is the contraction or dilatation of the vessels conveying the bodily fluids. He then goes on to indicate how the theory is applied to the phenomena of grief. In this, as in every painful emotion, the vessels are contracted. The first effect of this is to check the normal process of evaporation and force the contained substances into the lower cavities; hence deep breathing, sighs and groans, the object being to relieve the pressure on the lungs. The palpitation of the heart is caused by the action of the gall which, owing to the general contraction of the vessels, is driven into the orifice of the stomach; hence too the sufferer's pale and yellow look. Weeping is due to the fact that the evaporations in the vessels being checked and their functions in the viscera impeded, they rise to the head, accumulate as moisture and descending to the eyes are pressed out by the eyelids as tears. In joy we have opposite effects. The vessels are dilated and all the viscera conspire to enhance the vitality. In particular, respiration is invigorated, the volume of air inhaled is increased, as indicated by the puffed-out cheeks; to facilitate its passage nature provides for its expulsion through the mouth; and this, according to the representation, is laughter. Crude as it is, a pronounced vasomotor theory of this sort appearing at this time is not without historical importance.

SYDENHAM

After a long period of darkness, in which medical thought seems to be theoretical rather than biological, there comes a new attitude in the latter part of the 17th century. Sydenham's letter to Dr. William Cole (January, 1681-82) (8) furnishes a striking description of hysteria and hypochondria. A few quotations will indicate his insight:

... which I own are neither so easily discoverable nor so readily curable as other diseases. . . . It should seem that no chronic disease occurs so frequently as this; and that, as fevers with their attendants constitute two-thirds of the diseases to which mankind are liable, upon comparing them with the whole tribe of chronic distempers, so hysteric disorders, or at least such as are so called, make up half the remaining third part; that is, they constitute one moiety of chronic distempers.

He speaks of the similarity of hysteria and hypochondria. After commenting on a long series of visceral disorders associated with hysteria, he states:

But their unhappiness does not only proceed from a great indisposition of body, for the mind is still

more disordered, it being the nature of this disease to be attended with an incurable despair; so that they cannot bear with patience to be told that there is any hopes at all of their recovery, easily imagining that they are liable to all the miseries that can befall mankind, and presaging the worst evils to themselves.

Though, in the main, Sydenham attributed this disorder to visceral disease, he does mention the external causes. In the last analysis he falls back on the mystical vital spirits, but this did not exclude visceral disease. In other words, the disorders of the vital spirits affecting the viscera and visceral disease were what Sydenham dealt with.

WILLIS

Contemporary with Sydenham was Thomas Willis. That he was still dealing with animal spirits is shown in the chapter in *The London Practice of Physick* (9) (1685) titled "Instructions Concerning Cordial Medicines, and Lexipharmicks, of Preservatives Against Venome, with Prescripts of Them":

If the thing be duly considered, the notion of Cordial Medicines was not well introduc'd, but is a meer vulgar error; for since it is not the Heart which is the subject of Life, but chiefly, and in a manner only the Blood, and in regard the Soul it self (on whose existence and act in the Body Life depends) is founded partly in the Blood, and partly in the united stock of Animal Spirits, it plainly follows that Medicines which preserve Life entire, or restore it when in danger, do rather and more immediately regard these parts of the Soul, to wit, the Blood, the Animal Spirits than the Heart, which is a meer Muscle, serving for the Circulation of the Blood, and as often as it slackens in performing this duty, or gives it off. This does not happen through its own fault, but through that of the Blood and Animal Spirits, by which it is actuated.

It is interesting to note that he also believed in witchcraft and gives a differential diagnosis (10):

That Convulsive distempers are sometimes excited by witchcraft, is both commonly believed and usually affirmed by many Authors worthy of Credit: and indeed, as we do grant, that very oftentimes most admirable passions are produced in the humane body by the delusions of the Devil, forasmuch as he, to cause wonders, by which he might rule, by the subtlety of working, insinuates to the sensitive soul, or the constitution of the animal spirits, heterogeneous Atoms of little Bodies, and so adds now spurs or pricking forward, and now casts chains on its functions, and now carries them to mischief: also by some means he enters himself into the humane body, and as it were another more

mighty soul, is stretched thorow, it actuates all the parts and members, inspires them with an unwonted force, and governs them at his pleasure; and incites to the perpetrating of most cruel and supernatural wickednesses: yet all kind of convulsions, which besides the common manner of this disease, appear prodigious, ought not presently to be attributed to the enchantments of Witches, nor is the Devil presently or always to be brought upon the stage. For indeed as often as a child, or relation of some man of the richer sort is by chance taken with most cruel and unusual Convulsions, for the most part it falls out, that by and by the next old Woman is accused of Witchcraft, she is made guilty, and very hardly, or not at all, the wretch escapes the flames, or an halter; when in the mean time, the Disease proceeding from causes meerly natural, may be easily cured, by no other Exorcism, than Remedies usually prescribed against Convulsive Diseases: In truth the animal spirits being indued with a more cruel explosive Copula, and being stricken by it all of a heap together, obtain so much strength and vigour, beyond their proper and wonted power, as the flame of Gun-powder has above the burning of the common flame; so that those who obnoxious to this Disease, out of the fit may be govern'd, lifted up, and moved at pleasure, with the light help of one man; when the same is upon them, make nothing of the utmost endeavours and force of at least four of the strongest men: But if in the case of any one that is sick, there arise a suspicion of Witchcraft, or Fascination, there are chiefly two kinds of motions that are wont to create and cherish this opinion, viz. 1. If the Patient doth perform the contortions or gesticulations of his members, or of his whole body, after that manner, which no sound man, nor mimic, or any tumbler can imitate. Then, Secondly, If such strength be shown, that surpasses all human force; to which, if the avoiding of monstrous things happen, as when bundles, as Henry van Heers relates, are cast forth by Vomit; or a live EEL as Cornelius Gamma tells, voided by Stool, without doubt it may be believed that the Devil has, and doth perform his parts in this Tragedy.

It were easie to heap together very many, and indeed admirable Histories of persons of every Age and Sex, affected after a stupendious, and as it were super-natural manner, with the manifest suspicion of Witchcraft: for such are every where extant among Authors, both Physicians, and Philosophers; and because vulgar rumor noises about Diseases caused by Witchcraft, to happen often in almost every Country: for because these kind of cases are full of Imposture, or always increased by the fictitious lies of the relators, to create admiration (and for that they rarely fall under the medical cure) I will here purposely omit them: what remains is, That I proceed to unfold the next kind of universal Convulsions, to wit, which comes upon malignant, or otherwise irregular or ill-cured Fevers.

It is also interesting to note that he does not include hypochondria and hysteria as

nervous diseases but puts them under convulsive disorders:

The hysterical passion is of so ill fame among the Diseases belonging to Women, that like one half damn'd, it bears the faults of many other Distempers: For when at any time a sickness happens in a Womans Body, of an unusual manner, or more occult original, so that its cause lies hid, and the Curatory indication is altogether uncertain, presently we accuse the evil influence of

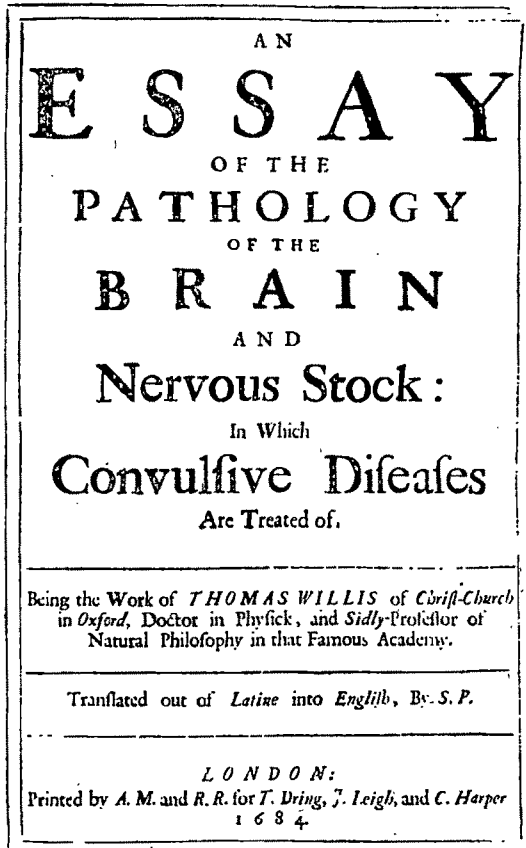


FIG. 1.

the Womb (which for the most part is innocent) and in every unusual symptom, we declare it to be something Hysterical, and so to this scope, which oftentimes is only the subterfuge of ignorance, the medical intentions and use of Remedies are directed.

In the foregoing Chapters we have clearly shown, that the Passions called Hysterical, do not always proceed from the womb, yea, more often from the head being distemper'd: next, we shall inquire concerning the Hypochondriacal Distempers, of what original and nature they are, and upon the fault of what parts they chiefly depend. The vulgar opinion is, That the symptoms wont to accompany this Disease are wholly

produced from the Spleen; wherefore, they are ascribed very much to vapours arising from this inward, and variously running up and down here and there; when in truth, these sicknesses for the most part are convulsions and contractions of the nervous parts: but that it might appear by what causes they are wont to be excited, we ought to consider first the symptoms themselves, and to place them into some order or rank.

Many interesting cases follow: He also gives an early example of faith cure:

Among our countrymen, as delivered from our ancestors, it is thought the seventh son, or he that is born the seventh one after another in a continued series can cure this disease by stroking it only with his hand; and truly I have known many whom no medicines could help, to have been cured in a short time only by that remedy. Few doubt but that this disease want to be cured often by the Touch of our King. The reason of such an effect (if it be merely natural) ought to be assigned not to any other thing than that in the sick (especially those of ripe age) the Phantasie and strong faith of the hoped for cure induces the alteration, or rather strengthening of the Brain, whereby the morbid disposition radicated in it is profligated.

PURCELL

With the turn of the century came John Purcell(11), who, writing in 1702, tries to break away from what he calls "the Galenick old-fashion'd doctors, who explicate all things by hidden qualities" and speaks of "our modern physicians, who though they are convinc'd that the body of man is a machine, which is acted all by inward springs and motions, yet may think it arrogance for a young physician to pretend to explain them by other notions than what ingenious Willis and his followers have deliver'd to us."

Referring to the causes of vapours, he says:

In the first place, it is demonstrative, that what we call the six non-natural causes of distempers, (viz. the air we breath; our meat and drink; sleep, and want of sleep; the motions and repose of our body; the retention or evacuation of its recrements and excrements; and the passions of the mind); are none of them the immediate cause of this distemper. Therefore since none of the above-mentioned causes can be admitted, it remains that the true cause must reside in the stomach and guts; whereof the grumbling of the one, and the heaviness and uneasiness of the other generally preceeding the paroxysm, are no small proofs. . . . No irritation can be felt in the stomach,

or elsewhere, unless the spirits flow from the parts irritated to the brain.

In other words, these symptoms are due to visceral disease. The circulation of the blood and a little more knowledge of nervous anatomy are worked into his scheme, but it is the same old scheme. There is a beginning to a chemical approach:

And as for the crudities in this case, they always abound with fixed acids, being either very sharp and sower, or rough and harsh, as the patient will inform you, by the taste she has of the fumes she belches up; and in those who do not belch at this time, it is demonstrative by the effects produced; since nothing but fixed acids, or humors of a rough harsh taste, are capable of coagulating the blood to such a degree, as is requisite to cause a general chillness throughout the whole body; and it is matter of fact that nothing but fixed acids, mix'd and combined with elementary earth can cause the harsh savour they often perceive in the fumes they belch up.

His cure is quite modern and might be termed psychotherapy:

Her drink should be natural French wine, but in less quantity, and with more water, than in the other constitutions, because the blood is more apt to be put into a violent fermentation. She must avoid all concerns, anxieties, and passions, but above all things, divert herself, as much as possible, with what is more pleasing, and suitable to her genius; as seeing of plays, frequenting merry company, taking the air in the parks, where besides the benefit of the fresh air she receives; the variety of different company, and objects, which she sees, concur to pleasure her mind, and remove all anxious thoughts, and thereby contribute much towards the cure. For upon diligent search and enquiry, you will almost always find, that those who are troubled with vapours, have some deep passion or concern upon them, which renders them pensive and thoughtful; wherefore the physician ought to consider attentively the circumstances of his patient, and to inform himself of her acquaintance, what may be the cause of her concern, which having found out, he must, with the aid of her friends and relations, facilitate to her, the means of obtaining what she desires. I know an eminent practitioner who assured me, he has found better effects from this method alone, than from most other remedies that can be prescrib'd in this disease.

CHEYNE

A generation later, in 1733, George Cheyne published his great book, *The English Malady: Or a Treatise of Nervous Diseases of All Kinds*(12). The subtitle includes, as

well as nervous disease, "Spleen, Vapours, Lowness of Spirits, Hypochondriacal, and Hysterical Distempers, etc." As with all relatively unknown illnesses, nervous disease

ENGLISH MALADY. And I wish there were not so good grounds for this reflection. The moisture of our air, the variableness of our weather, (from our situation amidst the ocean) the rankness and fertility of our soil, the richness and heaviness of

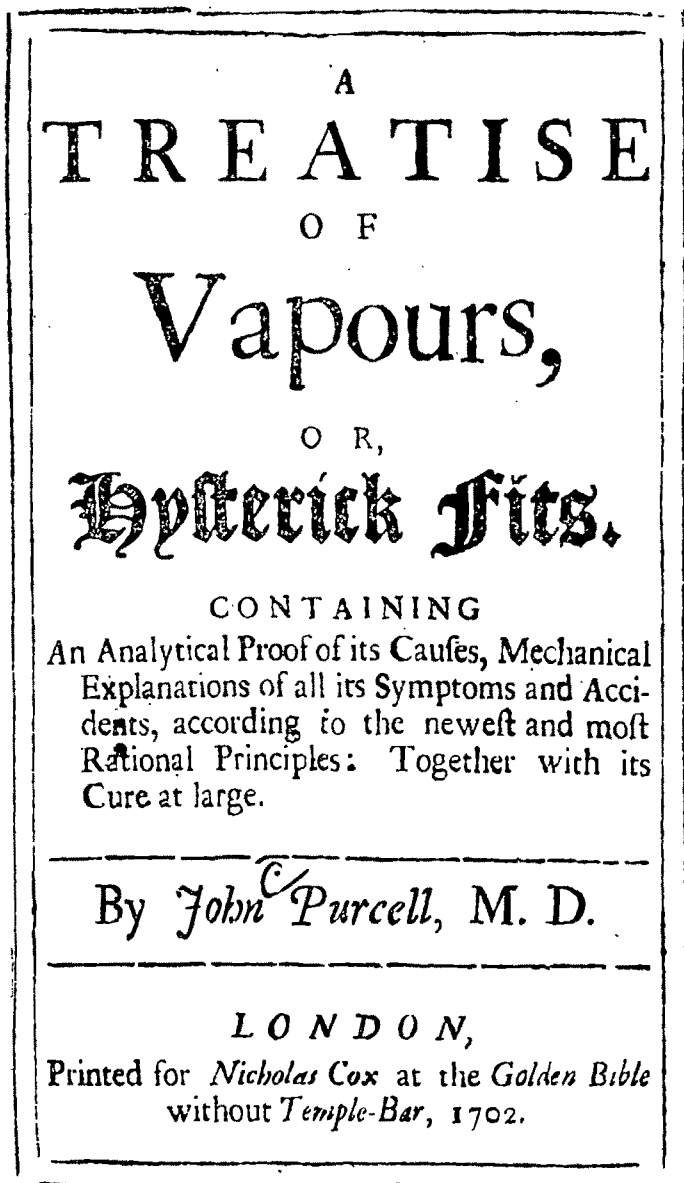


FIG. 2.

is attributed to the climate and the evils of modern times. He says in his Preface:

The title I have chosen for this treatise, is a reproach universally thrown on this Island by foreigners, and all our neighbors on the Continent, by whom nervous distempers, spleen, vapours, and lowness of spirits, are in derision, called the

our food, the wealth and abundance of the inhabitants (from their universal trade) the inactivity and sedentary occupations of the better sort (among whom this evil mostly rages) and the humour of living in great, populous and consequently unhealthy Towns, have brought forth a class and set of distempers, with atrocious and frightful symptoms, scarce known to our ancestors,

and never rising to such fatal heights, nor afflicting such numbers in any other known nation. These nervous disorders being computed to make almost one third of the complaints of the people of condition in England.

T H E
English Malady :
O R, A
T R E A T I S E
O F
Nervous Diseases of all Kinds,
A S
Spleen, Vapours, Lowness of Spirits,
Hypochondriacal, and Hysterical
Distempers, &c.

In THREE PARTS.

PART I. Of the Nature and Cause of Nervous Distempers.

PART II. Of the Cure of Nervous Distempers.

PART III. Variety of Cases that illustrate and confirm the Method of Cure.

With the AUTHOR's own CASE at large.

———Facilis descensus Avernì,
Sed revocare Gradum, superasque evadere ad Aras,
Hic Labor, hoc Opus est. Pauci quos Æquus amavit,
Jupiter, aut ardens exivit ad Æthera Virtus
Dis Geniti potuere——— VIRG.

By **GEORGE CHEYNE, M. D.**
Fellow of the College of Physicians at Edinburgh, and F. R. S.

L O N D O N :

Printed for G. STRAHAN in Cornhill, and
J. LEAKE at Bath. M.DCC.XXXIII.

FIG. 3.

One can see from his work the continuation of the chemical approach. The word "nervous" seems to have become well established. Like Purcell, he recommends—

The best of all is, where amusement or entertainment of the mind is joined with bodily labour, and constant change of air, as in hunting, bowls, billiards, and the like, and riding journies about

business: for the entertainment of the mind, and keeping it agreeably diverted from reflecting on its misfortunes or misery, makes exercise infinitely more beneficial, as thoughtfulness, anxiety and concern render it quite useless.

He is definite in attributing these things to physical causes:

I never saw any person labour under severe, obstinate, and strong nervous complaints, but I always found at last, the stomach, guts, liver, spleen, mesentery, or some of the great and necessary organs or glands of the lower belly were obstructed, knotted, schirrous, or spoiled, and perhaps all these together; and it may be very justly affirmed, that no habitual and grievous, or great nervous disorders, ever happened to any one who laboured not under some real glandular distemper, either scrophulous or scorbutical, original or acquired.

There follow a number of cases, one of which was cured without any medicine whatever, by a clergyman.

DOVAR

Our old friend, Thomas Dovar (13), also writing in 1733, has a chapter on "Hypochondriacal and Hysterical Diseases." He says:

Here are two different names for the same distemper; nor can they be distinguish'd otherwise than thus: what we call hypochondriacal in men, we term hysterical in women. I shall enter only on hysterical effects, because they are more common, and more visible in the finer sex. There is no disease incident to human bodies but these hystericisms will counterfeit so exactly, that without the greatest caution, the physician must be deceived.

He then goes on to give its effect when it seized the heart, the lungs, the gullet or cesophagus, the side, stomach, intestines, kidneys, the womb, and "neither are the teeth or nails free." He attributes it to "an irregular motion of the animal spirits, which proceed from a weakness of them" and says:

The only help which can be administered in this disorder, is to fortify the animal spirits, and strengthen the Genus Nervosum: which is done by proper neuroticks, deopulatives, and such as strengthen the stomach, and help digestion: In all these there are no evacuations; and yet it may be affirm'd, these are proper remedies in the above-mentioned distemper.

FLEMYNG

In 1740, there appears a curious Latin poem with "Neuropathia" in the title. Flem-

yng(14) follows Willis in stating that hypochondria and hysteria are one and the same, and thinks that it is a disturbance of the nervous liquid and the animal spirits which causes the trouble.

chondriac, or Hysteric. Of late, they have also got the name of Nervous; which appellation having been commonly given to many symptoms seemingly different, and very obscure in their nature, has often made it to be said, that Physicians have bestowed the character of nervous, on all those

J. W. Stearns, Jr.
OBSERVATIONS

ON THE

NATURE, CAUSES, and CURE

Of those DISORDERS which have been commonly called

**NERVOUS, HYPOCHONDRIAC,
or HYSTERIC:**

To which are prefixed some Remarks on the
SYMPATHY of the NERVES.

BY

ROBERT WHYTT, M. D. F. R. S.

Physician to his Majesty, President of the Royal College
of Physicians, and Professor of Medicine in the University
of Edinburgh.

Συμπαθία πνεύμα: Hippocrat. de aliment. § 4.

The SECOND EDITION, Corrected.

EDINBURGH:

Printed for T. BECKET, and P. A. DE HONDT, London;
and J. BALFOUR, Edinburgh.

M DCC LXV.

FIG. 4.

WHYTT

The trend of thought from then on is well indicated by Robert Whytt(15), sometimes called "the father of physiology," writing in 1765. His Preface has quite a modern tinge: The disorders which are the subject of the following observations, have been treated of by authors, under the names of Flatulent, Spasmodic, Hypo-

disorders whose nature and causes they were ignorant of.

He has a section on "Sympathy of the Nerves" and says:

Nothing makes more sudden or more surprising changes in the body, than the several passions of the mind. These, however, act solely by the mediation of the brain, and, in a strong light, shew its

sympathy with every part of the system. Such is the constitution of the animal frame, that certain ideas or affections excited in the mind, are always accompanied with corresponding motions or feelings in the body; and these are owing to some change made in the brain and nerves, by the mind or sentient principle: but what that change is, or how it produces those effects, we know not: as little can we tell, why shame should raise a heat and redness in the face, while fear is attended with a paleness. These, and many other effects of the different passions, must be referred to the original constitution of our frame, or the laws of union between the soul and body.

He gives the general causes as: (1) "Some morbid matter bred in the blood; (2) the diminution or suppression of some habitual evacuation; (3) the want of a sufficient quantity of blood"; and the particular causes as: "wind, tough phlegm, worms in the stomach and bowels; aliments improper in their nature or quantity; obstruction, frequently of the scirrhus kind, in the abdominal viscera; sudden and violent affections of the mind." He gives a number of cases, as well as cures.

MUSGRAVE

Samuel Musgrave, writing in 1776, has an honest title, at least: *Speculations and Conjectures on the Qualities of the Nerves*(16). His general thesis is that all disease, in the last analysis, is nervous, but he says in his introductory paragraph:

As Philosophers at present pay but little regard to any doctrines, that are not supported by experiments, it becomes necessary for every man who solicits their attention, either to support his opinions by experimental proof, or to shew that the subject he is treating will not admit of it. I am afraid the Art of Healing, notwithstanding the many ingenious attempts to illustrate and improve it by experiments, will be found in the end to fall under this latter description. To know the relative properties of any two substances, and their agency one upon another, it is necessary to bring them both together to the test of experiment. Now the subject of medicine being the living human body, upon which we cannot at pleasure make experiments, we have no way of determining with philosophical exactness, the effects producible in it by the application of other substances.

TISSOT

Tissot(17), writing in 1755, speaks of the moral causes of disease of the nerves and the effect of the imagination and nervous tension. He calls attention to the effect of the

"passions," indicating that joy, hope, love and desire are not as apt to cause nervous troubles as are hate, envy, jealousy, rage and sadness. He has a good deal to say about sympathy of the nerves quite suggestive of the modern thought concerning psychosomatic medicine.

CULLEN

William Cullen's great work first appeared in 1777(18). Part II treats of Neuroses or Nervous Diseases, this possibly being the first appearance of the word "neuroses." Since there are 171 pages, we can give them only the briefest attention. It is interesting to find chapters on Dyspepsia or Indigestion, Palpitation of the Heart, Dyspnoea or Difficult Breathing, Colic, Diarrhoea, Diabètes. Hypochondriasis, or the Hypochondriac Affection, commonly called Vapors or Low Spirits, is treated at great length. Whereas it is described as a state of mind and there is much wise comment concerning the mental attributes, its seat is definitely the stomach and it is definitely associated with dyspepsia. He speaks of the moral causes, however, and the treatment is largely what would be called today psychotherapy or diversional therapy:

It is now proper that we proceed to consider the most important article of our practice in this disease, and which is, to consider the treatment of the mind, an affection of which sometimes attends dyspepsia, but is always the chief circumstance in hypochondriasis. What I am to suggest here, will apply to both diseases; but it is the hypochondriasis that I am to keep most constantly in view. The management of the mind, in hypochondriacs, is often nice and difficult. The firm persuasion that generally prevails in such patients, does not allow their feelings to be treated as imaginary, nor their apprehension of danger to be considered as groundless, though the physician may be persuaded that it is the case in both respects. Such patients, therefore, are not to be treated either by rallery or by reasoning. It is said to be the manner of hypochondriacs to change often their physician, and indeed they often do it consistently; for a physician who does not admit the reality of the disease, cannot be supposed to take much pains to cure it, or to avert the danger of which he entertains no apprehension. If in any case the pious fraud of a placebo be allowable, it seems to be in treating hypochondriacs; who, anxious for relief, are fond of medicines, and, though often disappointed, will still take every new drug that can be proposed to them.

There is much more having to do with occupation, recreation, and so forth, not es-

entially different from the very latest word. Of hysteria he gives some comment and particularly describes the historical feature. His pathology is as follows:

With respect to this, I think it will, in the first place, be obvious, that its paroxysms begin by a convulsive and spasmodic affection of the alimentary canal, which is afterwards communicated to the brain, and to a great part of the nervous system. Although the disease appears to begin in the alimentary canal, yet the connection which the paroxysms so often have with the menstrual flux, and with the diseases that depend on the state of the genitals, shows, that physicians have at all times judged rightly in considering this disease as an affection of the uterus and other parts of the genital system. With regard to this, however, I can go no farther. In what manner the uterus, and in particular the ovaria, are affected in this disease; how the affection of these is communicated with particular circumstances to the alimentary canal; or how the affection of this, rising upwards, affects the brain, so as to occasion the particular convulsions which occur in this disease, I cannot pretend to explain. But although I cannot trace this disease to its first causes or explain the whole of the phenomena; I hope, that with respect to the general nature of the disease, I may form some general conclusions, which may serve to direct our conduct in the cure of it.

PARKINSON

James Parkinson in *Medical Admonitions to Families* (1803) (19), under "Hysterical Affections" states: "As these are, in general, symptomatic of some other disease; and most commonly, perhaps, of some particular affection of the uterine system, the rules for their treatment can only be formed, upon a knowledge of those particular circumstances to which they owe their origin"; and under "Hypochondriac Affection" he quotes Cullen and then warns against ridiculing such patients. He recognizes that the patient can do a great deal for himself and speaks of the fondness of patients for medicine. "The belief that this is due to the will of the sufferer is cruel and fallacious." He recommends diversion, such as cards, draughts, backgammon and even chess.

TROTTER

Thomas Trotter (20), "Late Physician to His Majesty's Fleet," writes in 1808 on *The Nervous Temperament* and speaks of those diseases "commonly called Nervous,

Bilious, Stomach & Liver Complaints: Indigestion: Low Spirits, Gout, etc."

But there is a species of sympathy among certain organs of our body, that points out a more intimate connection with the mind, than what is possessed by others. The lungs and heart, in the thorax: the stomach, intestines, liver, and all the viscera subservient to digestion, have an innate sympathy with our emotions. . . . I have also seen a considerable number of cases of nervous affection, with all the signs which are said to mark angina pectoris.

Under "The General Doctrine of These Diseases" he says:

The most prominent parts of the character of these diseases are, that they occur chiefly under peculiar modes of living; are hereditary, and affect, in a particular manner, the organs subservient to the preparation of nourishment. . . . They are so far to be classed among mental disorders, that a disposition of mind, not easily to be defined, attends every degree and stage of them; beginning with uncommon sensibility to all impressions; peevishness of temper; irresolution of conduct; sudden transitions from sadness to joy, and the contrary; silent or loquacious; officiously busy, or extremely indolent; irascible; false perceptions; wavering judgment; melancholy; madness: exhibiting in the whole, signs of deranged sensation.

And finally:

The causes which produce nervous diseases, may be divided into two kinds, namely, those which arise from the mind; and those which arise from the body. Of the first kind, are all the disorders of the passions: of the second kind, all those causes which affect particular organs of the body, that by their office, are intimately connected with the nervous system. Many of these causes, of both the mental and corporeal class, act for a length of time before they bring forth actual disease; but this mode of operation would seem to happen only where there was no predisposition. They may therefore be said to create predisposition, and when this is sufficiently done, a train of symptoms appears which constitutes real disease.

GEORGET

The Medical Renaissance, so-called, in France, resulted in a considerable literature concerning these matters. There were two schools of thought: one which regarded all these disorders as organic, and the other, as functional. Georget's *De la Physiologie du Systeme Nerveux et Specialement du Cerveau* (1821) (21) may be taken as an example of the literature. Although most of the book has to do with the viscera, he is

strongly of the opinion that there must be a lesion to account for the symptoms.

Il n'y a pas plus de maladies sans changement quelconque dans les dispositions des organes, que de phénomènes fonctionnels sans organes. Je ne conçois donc pas de que pourraient être des lésions

même siège, sont, à très peu de chose près, les mêmes maladies, se présentent chez l'homme et chez la femme, la première plus souvent chez celle-ci et la seconde plus fréquemment chez celui-là; ce qui tient à des dispositions particulières, relatives à des différences dans le système nerveux de l'un et de l'autre." He then goes on to say: "Presque tous les auteurs qui ont émis l'opinion que nous examinons, ont fait dériver l'hystérie de troubles du canal alimentaire.

DE
LA PHYSIOLOGIE
DU SYSTEME NERVEUX,
ET
SPÉCIALEMENT DU CERVEAU.
RECHERCHES

SUR LES MALADIES NERVEUSES

EN GÉNÉRAL,

ET EN PARTICULIER SUR LE SIÈGE, LA NATURE ET LE
TRAITEMENT DE L'HYSTÉRIE, DE L'HYPOCHONDRIE, DE
L'ÉPILEPSIE ET DE L'ASTHME CONVULSIF.

PAR M. GEORGET,

Docteur en Médecine de la Faculté de Paris, ancien Interne de première
classe de la Division des Aliénés de l'Hospice de la Salpêtrière.

TOME PREMIER.

A PARIS,

CHEZ J. B. BAILLIÈRE, LIBRAIRE, RUE DE
L'ÉCOLE DE MÉDECINE, N° 16.

1821.

FIG. 5.

vitales, nerveuses (hors des nerfs), de fonction, sans matière, etc., avec intégrité de l'organisation. Mais je ne garderai bien de prétendre toujours trouver après la mort la cause organique de tous les désordres observés pendant sa vie.

He speaks of the neuroses of digestion and of the heart, the stomach, etc.

Les trois opinions sur le siège de l'hystérie, qui nous restent à examiner, se ressemblent sous deux rapports: l'utérus est étranger à la production de cette maladie; l'hystérie et l'hypochondrie ont le

BARRAS

J. P. T. Barras, in a treatise on *Les Gastralgies et Les Entéralgies, ou Maladies Nerveuses de l'Estomac et des Intestins* (1829) (22) says, under "Considerations Générales Sur Les Névroses" [and in a footnote:] Lesion du sentiment et du mouvement, sans inflammation ni lésion de structure. (Pinel, Nosog. philos.):

La doctrine dite physiologique a rendu de grands services à la médecine; je suis loin de les contester. Mais, en détruisant d'anciennes erreurs, elle en a créé de nouvelles, dont quelques-unes sont peut-être aussi dangereuses que celles qui existaient auparavant. Parmi ces nouvelles erreurs, il en est une surtout contre laquelle on ne saurait protester avec trop d'énergie, parce qu'elle tend à faire et fait en effet de nombreuses victimes; c'est celle qui consiste à regarder les névroses comme des inflammations, et à les traiter constamment par les antiphlogistiques. Je n'hésite point à le dire, cette innovation fait rétrograder la science, et devient souvent funeste aux malades.

Here we have functional nervous disease.

In the same treatise, under a chapter titled "Histoires Particulières" he continues:

Les praticiens sont souvent embarrassés dans le traitement des maladies de l'estomac, à cause de la diversité d'opinions et de l'incertitude qui existent maintenant sur leur nature. Avant la doctrine physiologique, les auteurs admettaient généralement des affections nerveuses de cet organe; elles étaient connues sous les noms de gastralgie, gastodynée, cardialgie, hypochondrie, etc. On les traitait par les adoucissants, les calmans, les toniques, les eaux minérales, les antispasmodiques, l'air de la campagne, l'exercice et les distractions. On variait d'ailleurs les moyens curatifs selon les causes de la maladie, l'idiosyncrasie des malades, et mille autres circonstances. Remettant tout en question, M. Broussais et ses partisans exclusifs ne veulent point admettre de névroses gastriques; à leurs yeux, toutes les maladies regardées comme telles jusqu'à ce jour sont des gastro-entérites chroniques survenues chez des personnes irritables, en d'autres termes des inflammations, qu'il faut constamment traiter par des sangsues à l'épigastre, l'eau de gomme et le régime atonique. Les faits que je vais exposer pourront éclairer cette discus-

sion. Ils feront voir que le principal organe digestif est souvent atteint d'affections purement nerveuses, c'est-à-dire de lésions de la sensibilité, sans inflammation ni altération de structure, et que ces affections s'aggravent toujours par le traitement antiphlogistique rigoureux et long-temps continué, tel qu'on l'emploie aujourd'hui: en un mot, ces faits prouveront que les médecins physiologistes sont dans l'erreur à cet égard, et que sur ce sujet, comme sur beaucoup d'autres, loin d'avoir fait faire des progrès à la médecine, ils lui ont fait un grand mal, en la détournant de la route sûre de l'observation, pour la ramener vers le champ dangereux des systèmes. Enfin, je crois pouvoir démontrer, par des faits concluans et des raisonnemens plausibles: 1° que la gastro-entéralgie diffère essentiellement de la gastro-entérite chronique; 2° que la théorie dans laquelle ces maladies sont regardées comme identiques, et devant être traitées par les mêmes moyens, fait commettre des fautes extrêmement graves; 3° que cette théorie est, par conséquent, une arme dangereuse dans les mains des médecins inexpérimentés, ou séduits par les écarts de la nouvelle école.

DUBOIS

This controversy waxed so violent that a prize was offered for the best treatise on the subject. The prize was won by Frédéric Dubois of Amiens, who published the *Histoire Philosophique de l'Hypochondrie et de l'Hystérie* in 1833(23). There is not a new word in this treatise, but one wishing to review medical thought on these matters prior to this date need look no farther, for he covered the literary history thoroughly, if not critically.

REID

John Reid's *Essays on Hypochondriasis and Other Nervous Affections*(24), written in 1823, contains the following remark: "In the class of what are called nervous affections, it unfortunately happens that the very essence of the disease often consists in a debility of the resolution, that the ailment of body arises from an impotency of spirit, a palsy of the power of resistance." He apparently does not distinguish between melancholia and hypochondria. The whole book may be characterized as a philosophical treatise on insanity. Cases in the appendix are referred to as madness. It is interesting that his first chapter is an essay on "The Influence of the Mind on the Body."

BRODIE

Sir Benjamin C. Brodie(25)(1837) became interested in functional nervous disease. He cut the median nerve, found hysterical patients with the same symptoms, and came to this conclusion: "Now such a case as this is by no means uncommon. It is only one of many which might be adduced in proof of this proposition, namely, that the natural sensations of a part may be increased, diminished, or otherwise perverted, although no disease exists in it which our senses are able to detect either before or after death."

AXENFELD

As late as 1864, Axenfeld(26) published a monumental work on the neuroses, which is largely a review of the previous literature. He spoke particularly in these diseases of their functional nature and the absence of anatomical lesions, and also the absence of fever, the intermittent course, and the rarity of death. They are still classified according to the organs affected, although he has a good deal to say of the "passions." However, there is hardly a new word in the whole treatise.

CHANNING

Walter Channing(27), in 1860, published an interesting case, dividing his discussion into Part I, Physical, and Part II, The Mind. Under the title, *Bed Case*, he expresses a great deal of insight into functional nervous disease.

With advancing knowledge of electricity there had come into medicine a belief in the efficacy of this method of treatment. As early as 1776 Graham(28) had written a book on the subject. He speaks particularly of cases cured by sitting in a grove near the doctor's house. What appears now to have been a faith cure was attributed by him to the miraculous rays of the galvanic current. Birch (1802)(29), Yatman (1810)(30) and Hare (1819)(31) give further evidence of the efficacy of the galvanic current.

BEARD

The development of induced electricity in 1831 was subsequently followed by the utili-

zation of faradism in therapy. Beard and Rockwell published a book in 1867 titled, *The Medical Use of Electricity With Special Reference to General Electrization* (32). Apparently they had a large practice in New York and, as might be expected, a considerable number of their patients were nervous. Electricity became the panacea for all obscure ills and Beard became its exponent. Beard states: "My first paper on this subject, based on the study of thirty cases, was prepared in 1868, was read before the New York Medical Association, and was published in the Boston Medical and Surgical Journal April 29, 1869." In this, an article titled, *Neurasthenia, or Nervous Exhaustion* (33), he says:

I am to speak to-night of a condition of the system that is, perhaps, more frequently than any other, in our time at least, the cause and effect of disease. I refer to *neurasthenia*, or exhaustion of the nervous system.

The morbid condition or state expressed by this term has long been recognized, and, to a certain degree, understood, but the special name *neurasthenia* is now, I believe, for the first time presented to the profession.

It is quite recently, indeed, that the phrase nervous exhaustion has been popularized, at least as a term expressive of any special condition of the system. Prof. Austin Flint, in his Treatise on the *Principles and Practice of Medicine*, devotes a brief space to this subject, and acknowledges his indebtedness to Dr. Fordyce Barker for first suggesting the phrase *nervous asthenia* as expressive of a special morbid condition. Besides this brief notice of Prof. Flint, this important condition of the nervous system has not, so far as I know, been dignified by a separate heading, or distinct chapter in any of our most approved treatises on the Practice of Medicine, although the general phrase *nervous exhaustion* quite frequently occurs in conversation and medical literature, and is now the common property of the profession.

My own attention was called to this morbid condition quite early in my professional life, and in the cultivation of the department of Neurology and Electric-therapeutics, I have enjoyed excellent opportunities both for the study and the treatment of all the various grades and phases of this frequent malady. As a matter of necessity in describing, recording and studying cases of nervous diseases, I have for some time been in the habit of employing the term *neurasthenia* to express the morbid state that is commonly indicated by the indefinite phrase nervous exhaustion. This nomenclature would seem to be justified by philological analogy, by scientific convenience, and by actual necessity.

The derivation of the term *neurasthenia* is

sufficiently obvious. It comes from the Greek *νεῦρον*, 'a nerve,' *a*, privative, and *σθένος*, 'strength'; and, therefore, being literally interpreted signifies want of strength in the nerve.

From this time on, throughout his life, Beard became the prophet of neurasthenia. He spoke frequently and published widely, and neurasthenia, which he called "The Great American Disease," was firmly established in medicine till modern times. It is,

ON

NERVOUS EXHAUSTION (NEURASTHENIA)

ITS

Symptoms, Nature, Sequences, Treatment

BY

GEORGE M. BEARD, A.M., M.D.

FELLOW OF THE NEW YORK ACADEMY OF MEDICINE; OF THE NEW YORK ACADEMY OF SCIENCES; VICE-PRESIDENT OF THE AMERICAN ACADEMY OF MEDICINE; MEMBER OF THE AMERICAN NEUROLOGICAL ASSOCIATION; OF THE AMERICAN MEDICAL ASSOCIATION; THE NEW YORK NEUROLOGICAL SOCIETY, ETC.

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FIG. 6.

perhaps, the first unitary concept of functional nervous disease. Although Beard wrote on specific types of neurasthenia, for instance sexual, his main thesis was one of nervous exhaustion, and as one reads his writings, it may with some appropriateness be said that they represent the origin of a chemical theory of disease; that is, he believed that the wear and tear of modern American life exhausted the nervous system and produced toxins which poisoned the patient. If wear and tear was the cause of this condition and nervous exhaustion the

pathology, insofar as Beard was concerned, electricity, especially the faradic current, was the cure.

NOTE BY EDITOR.—In his report "Neuropsychiatry in Michigan" (AMERICAN JOURNAL OF PSYCHIATRY, March 1943), Dr. Thomas J. Heldt states that Dr. Edwin Holmes Van Deusen, superintendent of the Michigan Asylum for the Insane at Kalamazoo, "was the first to add the word 'neurasthenia' to the American medical vocabulary. He described its symptomatology in an article written in 1868 and published early in 1869, before and independently of the studies of George M. Beard published in the same year."

Dr. Stearns contributes this additional note:

The article by Van Deusen is called "Supplement to the Report of the Board of Trustees of the Michigan Asylum for the Insane for the years 1867-8." It is dated Lansing, 1869. There is a preface dated February 24, 1869. So I take it this definitely stamps the publication of this article as February 24, 1869, though obviously prepared during 1868. The title of his article is "Observations on a Form of Nervous Prostration (Neurasthenia) Culminating in Insanity." On page 9 he says:

"As to the term *neurasthenia*, it is an old term, taken from the medical vocabulary, and used simply because it seemed more nearly than any other to express the character of the disorder and more definite, perhaps, than the usual term 'nervous prostration.'"

So there is no question about the use of the word "neurasthenia" in print on February 24, 1869. However, he is describing cases admitted to a hospital for mental disease and his cases sound very much like what we now would call manic-depressive insanity—depressed. Van Deusen cites one case as early as 1860, but does not say whether he was using that term as early as that or not.

Beard later states: "My first paper on this subject, based on the study of 30 cases, was prepared in 1868, was read before the New York Medical Association, and was published in the Boston Medical and Surgical Journal April 29, 1869." I have verified the publication of this.

To summarize: Van Deusen used the word "neurasthenia" in print on February 24, 1869, and Beard used it in print April 29, 1869. Thus, from the standpoint of publication, Van Deusen has priority.

COWLES

The concept of neurasthenia continued to dominate thought, especially in America, for many years. As late as 1891, Edward Cowles (34), in a Shattuck Lecture read before the Massachusetts Medical Society, followed, in a general way, Beard's teachings, though by this time the chemical concept became more fully developed. Cowles goes to great length into recent chemical

discoveries, uses the term "auto-intoxication," and speaks of the condition as due to fatigue and, more specifically, due to the accumulation of specific toxins in the body. His treatment is palliative.

Articles by Levillain (1891) (35), Knapp (36) and Putnam (1896) (37) and Morton Prince (1898) (38) follow, in a general way, the concept of nervous exhaustion with its toxic effects. The trend is toward more emphasis on the mental attributes of the disease. Prince especially speaks of re-education as a mode of treatment.

MITCHELL

However, it is likely that the greatest adaptation of Beard's concept was made by S. Weir Mitchell of Philadelphia. His book, *Fat and Blood: An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria* (39), published in 1888, went through fifteen editions. His theory was decidedly chemical. He recognized the concept of nervous exhaustion, but attributed it to the loss of fat and blood. His treatment, the rest cure, was prescribed for the specific purpose of increasing fat and blood. There is, perhaps, no more famous American physician and one of the chief causes of his fame is the rest cure. He says:

There remains a class of cases desirable to fatten and redden,—cases which are often, or usually, chronic in character, and present among them some of the most difficult problems which perplex the physician. If I pause to dwell upon these, it is because they exemplify forms of disease in which my method of treatment has had the largest success; it is because some of them are simply living records of the failure of every other rational plan and of many irrational ones; it is because many of them find no place in the text book, however sadly familiar they are to the physician.

The group I would speak of contains that large number of people who are kept meagre and often also anaemic by constant dyspepsia, in its varied forms, or by those defects in assimilative processes which, while more obscure, are as fertile parents of similar mischiefs. Let us add the long-continued malarial poisonings, and we have a group of varied origin which is a moderate percentage of cases in which loss of weight and loss of color are noticeable, and in which the usual therapeutic methods do sometimes utterly fail. For many of these, fresh air, exercise, change of scene, tonics and stimulants are alike valueless; and for them the combined employment of the tonic influences I shall describe, when used with absolute rest,

massage and electricity, is often of inestimable service.

A portion of the class last referred to, and which I have yet to describe, is one I have hinted at as the despair of the physician. It includes that large group of women, especially, said to have nervous exhaustion, or who are defined as having spinal irritation, if that be the prominent symptom. To it I must add cases in which, besides the wasting and anaemia, emotional manifestations predominate, and which are then called hysterical, whether or not they exhibit ovarian or uterine disorders.

Nothing is more common in practice than to see a young woman who falls below the health-standard, loses color and plumpness, is tired all the time, by and by has a tender spine, and soon or late enacts the whole varied drama of hysteria. As one or other set of symptoms is prominent she gets the appropriate label, and sometimes she continues to exhibit only the single phase of nervous exhaustion or of spinal irritation. Far more often she runs the gauntlet of nerve-doctors, gynaecologists, plaster jackets, braces, water-treatment, and all the fantastic variety of other cures.

It will be worth while to linger here a little and more sharply delineate the classes of cases I have just named. I see every week—almost every day—women who when asked what is the matter reply, 'Oh, I have nervous exhaustion.' When further questioned, they answer that everything tires them. Now, it is vain to speak of all of these cases as hysterical, or as merely mimetic. It is quite sure that in the graver examples exercise quickens the pulse curiously, the tire shows in the face, or sometimes diarrhoea or nausea follows exertion, and though while under excitement or in the pressure of some dominant motive they can do a good deal, the exhaustion which ensues is out of proportion to the exercise used. I have rarely seen such a case which was not more or less lacking in color and which had not lost flesh; the exceptions being those troublesome instances of fat anaemic people which I shall by and by speak of more fully.

SAVILL AND HAMMOND

Neurasthenia appeared in every textbook of nervous disease, and Savill (40), writing in 1892, gives a bibliography of over 125 titles. There were those who resisted the concept of neurasthenia. Among these was William A. Hammond (41). Hammond was a man of distinction and prestige, having been Surgeon General of the United States Army during the Civil War and professor of diseases of the mind and nervous system at the Medical University of the City of New York. Therefore he spoke with great authority when he attributed many of the conditions called neurasthenia to cerebral

hyperaemia in his book published in 1878. He says in the Preface:

The disease which is considered in the ensuing pages is more common, according to my experience, than any other affection of the nervous system. It is especially an outgrowth of our civilization, and of that restless spirit of enterprise and struggle for wealth so characteristic of the American people. It is an easily preventable disorder, not for this purpose requiring extensive hygienic operations, but simply the acts of the individual in using his or her brain with the same regard for its well-being as is ordinarily extended by the humane carter to the muscular system of his horse. The brain of man is strong: it will endure a terrible amount of ill usage; but there are limits to the abuse which may be inflicted upon it with impunity, and few there be who do not pass them.

It is, perhaps, too much to expect the emotions to be entirely under the control of the individual, nor is it desirable that we should be reduced to the condition of intellectual automata, moved always by reason and judgment and never by feeling. But it is entirely within the power of every one, by that selfdiscipline, so seemly in all, to obtain such a degree of mastery over unworthy or excessive passions, as will prevent them dominating over the whole mind and body to the detriment of both.

Ill-regulated emotions are even more prolific of brain disorders than severe mental labor, and many a person considered to be suffering from what is called nervous prostration or exhaustion, is simply the subject of emotional disturbance and a consequent condition of cerebral hyperaemia.

The last few years have witnessed the death of many distinguished persons from the direct results of excessive brainwork, or the passionate excitement so commonly produced in men and women by the multitude of causes in operation upon them. In the hope, that what I have written may tend to the prevention or alleviation of suffering, I send out this little monograph.

He concedes his inability to prove cerebral hyperaemia, but gives a lot of data in its support and also quotes many other authors who support his belief. However, cerebral hyperaemia never became a real rival of neurasthenia.

BROWER

The concept of auto-intoxication, however, was developed extensively. Daniel R. Brower (42), in 1898, says:

We are at the beginning of a new era in the pathogenesis and treatment of the neural diseases. The discovery of the neuron has resulted in making clear some of the dark passages in physiology and pathogenesis, and the dynamic changes produced in these neurons by alcohol and other extrinsic poisons, that have been so marvelously

demonstrated by Andriezen, Van Gieson and others, and the reasonable inference that intrinsic poisons are equally powerful in establishing pathologic conditions, open up a new line of important therapeutic investigation.

He gives a great deal of chemical data and concludes as follows:

Conclusions. 1. Some of the nervous diseases are the product of auto-intoxication.

2. This autotoxis produces a parenchymatous degeneration of the nervous system, acute or chronic, that may result in the destruction of the structure and function of the nerve cells. (Van Gieson and Andriezen.)

3. The peculiar arrangement of the lymph channels in the nervous system makes auto-intoxication of the brain possible by the blocking of these channels.

4. The principal factor in this autotoxis is a disordered gastro-intestinal tract.

5. Gastrectasis, intestinal dyspepsia and coprostasis are ordinary conditions producing gastro-intestinal intoxication.

6. The diagnosis is to be made: (a) by a regional examination; (b) by examination of the gastric contents; and (c) by examination of the urine.

7. The urines will show increased amounts of indican, diminished total sulphates, and an increase in the amount of ethereal or conjugate sulphates.

8. There will also be found, usually in consequence of this autotoxis, a diminished hemoglobin record and a diminished number of red blood corpuscles.

9. The treatment should consist of lavage, enteroclysis, gastric and intestinal antiseptics, laxatives and hematinics.

As is well known, this ultimately led to removal of the colon in certain cases.

BILLINGS AND SALMON

Close upon the heels of auto-intoxication came the focal infection theory, well set forth by Frank Billings(43) in 1916. The improvement of anesthesia and the development of asepsis had allowed the surgeons a freedom of action never before dreamed. Whatever the neurologists and psychiatrists might say, pain and mal-function, to the rank and file of the medical profession, were visceral diseases. Fortified by concepts of auto-intoxication and focal infection, the surgeon ruthlessly attacked his patients. The uterus, no longer a little animal running about the body causing trouble, was a possible source of infection, and so the whole superstition was rationalized again and the uterus fell a victim to the efficacy of modern surgery and the lack of complete understanding of

functional nervous disease. The large intestine, the appendix, gallbladder, tonsils, teeth, fell before the onrushing belief in focal infection. As late as 1924 Thomas W. Salmon(44) says:

Just what form of physical disease the psychoneurosis is transformed into depends upon the direction of medical interest at the time. Uterine displacements, impacted molars and endocrine disorders have all served their turn.

TIMME

Contemporary with focal infection came endocrine imbalance. The ductless gland lent itself readily to mysticism and speculation and, beautifully aided and abetted by manufacturing pharmacists, the ox and the sheep were exploited in what now appears to have been but a forlorn hope. The work of Walter Timme(45) is typical and perhaps represents the high tide of the belief that endocrine imbalance was basic in causing functional nervous disease.

We have now reached the period of the full impact of the Freudian dogma, which is not history but contemporary thought. In the sixties and seventies, spear-pointed by the work of Charcot in France, there grew up a vigorous and lusty offshoot of medicine concerning itself with the psychic manifestations of nervous disease. This developed with little regard for the fundamental facts of internal medicine and had little effect upon the great body of medical thought and practice. The doctor, representative of the common man, still considered nervous manifestations as visceral disease and attacked such diseases, as of old, with such surgical and medical procedures as the philosophy of the time indicated. There was, in fact, a dichotomy in thought and practice.

I shall not attempt to even review the development of psychogenesis, psychopathology or psychotherapy, as these matters are not pertinent to the history. In fact, it may safely be assumed that the psychiatrists of today are familiar with these comparatively recent developments. However, in order to complete the perspective, it seems well to add a word about present-day trends.

Within the last few years studies have been made of the social situation of persons with functional nervous disease. The work

of Walter C. Alvarez(46-48) and his associates at the Mayo Foundation(49, 50) is characteristic. Finally, the term "psychosomatic medicine" represents the most modern development. Beginning with the epoch-making contribution of Walter B. Cannon(51), more and more attention has been given to this subject, both on the part of internists and psychiatrists. The literature is vast, but the work of Myerson(52) and of Pratt(53) is typical. It has been well summarized by Dunbar(54) in *Emotions and Bodily Changes: A Survey of Literature on Psychosomatic Relationships, 1910-1933* (2d. edition, 1938).

SUMMARY

In perspective it is obvious that a relationship between psyche and soma has been observed during the whole history of medicine. Until well within the last one hundred years no one conceived of nervousness in terms other than visceral disease. During the past hundred years there has been increasing emphasis upon the importance of psychological manifestations of illness until, at the high point of this interest the soma was almost forgotten. The tide has receded until now the interest is in the interrelations of physical and mental factors. The difference is that early physicians thought in terms of visceral disease as causing nervous manifestation, while today we have reversed the trend and think of visceral disorder in terms of nervous disease.

Reflection upon the history of medical thought may be profitable. The best minds of medicine have struggled with these disorders and contemporary fashion has been accepted as ultimate truth. The excellent descriptions show powers of observation of the highest quality, but the interpretation and the treatment are entirely matters of contemporary philosophy. To quote Lecky:

The doctrine, that the opinions of a given period are mainly determined by the intellectual condition of society, and that every great change of opinion is the consequence of general causes, simply implies that there exists a strong bias which acts upon all large masses of men, and eventually triumphs over every obstacle. The inequalities of civilisation, the distorting influences arising out of special circumstances, the force of conservatism, and the efforts of individual genius, produce in-

numerable diversities; but a careful examination shows that these are but the eddies of an advancing stream, that the various systems are being all gradually modified in a given direction, and that a certain class of tendencies appears with more and more prominence in all departments of intellect.

Nervous exhaustion, anemia, cerebral hyperemia, auto-intoxication, focal infection, glandular dysfunction, and psychogenesis have their day and then disappear except as matters of medical curiosity. This should lead us to a cautious, temperate and critical evaluation of present-day thought, in order that we may avoid, through excessive confidence, belief that the last hypothesis represents the ultimate truth.

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THE GENETIC THEORY OF SCHIZOPHRENIA

AN ANALYSIS OF 691 SCHIZOPHRENIC TWIN INDEX FAMILIES¹

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Despite notable changes in the attitude of contemporary psychiatry toward the constitutional problems of psychosomatic medicine, there is still a tendency to perpetuate the genetic theory of schizophrenia as a controversial issue.

Some arguments thrive largely on dialectic grounds and, from a scientific standpoint, are more apparent than real. Others are based on preconceptions which are kept alive by an ambiguous terminology and the pardonable tendency either to oversimplify a complex causality or to mistake it for obscurity. A main source of misunderstanding is the erroneous belief that acceptance of causation by heredity would be incompatible with general psychological theories of a descriptive or analytical nature, or that it might lead to a depreciation of present educational and therapeutic standards. Evidently, there is no point in presenting evidence of the inheritance of schizophrenia, if in subsequent statements the etiology of schizophrenic psychoses is likely to be listed as unknown, or if reservations are made regarding a similar psychotic syndrome labeled dementia præcox, or if the given genetic mechanism is finally dismissed as unessential or non-Mendelian.

From a genetic point of view, the main question to be clarified is whether or not the capacity for developing a true schizophrenic psychosis is somehow controlled by inherited, predispositional elements. In order to settle this problem beyond any reasonable doubt, only three types of investigative procedure are available. They are:

- (1) The pedigree or family history method,
- (2) The contingency method of statistical prediction, and
- (3) The twin study method.

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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The investigation of individual *family histories* is the oldest, simplest, and most popular method of recording familial occurrence of an apparently hereditary trait. Such a pedigree is often impressive to behold and sometimes as suggestive of the operation of heredity as is true with respect to the family unit² presented in Fig. 1. If the mating of two psychotic parents is found, under certain circumstances, to be capable of giving rise to seven definite cases of schizophrenia among the offspring, that is, in all the children of this union who reached the age of maturity, it would seem inadequate to disregard the possible significance of the biological factor prerequisite for inheritance, namely, consanguinity. On the basis of this single observation, however, the genetic hypothesis would be no more conclusive than either the assumption of *folie à neuf* due to "psychic contagion" or the supposition that the psychosis of the father of this remarkable sibship was not "inherited" because his parents had apparently been ordinary first cousins without schizophrenia.

Obviously, the general usefulness of the pedigree method is limited to the study of relatively rare unit characters which are easily traced and fairly constant in their clinical appearance. In more common traits and especially in irregularly expressed anomalies such as schizophrenia, it is necessary to employ statistical methods which demonstrate more clearly the effect of blood relationship.

This objective is accomplished by the *contingency method*, which compares the morbidity rates for representative samples of consanguineous and non-consanguineous groups. The results of such a procedure will

² The investigation of this family was carried out in collaboration with Miss Jean Mickey. The psychiatric aspects of this study will be discussed in another publication. As all the other charts and tabulations, the pedigree was arranged by Mrs. Helen Kallmann.

indicate whether or not a given anomaly occurs more frequently in blood relatives of unselected index cases than is to be expected in the light of the normal average distribution of the trait in the general population. The available morbidity figures for schizo-

to have lived under socio-economic conditions which cannot be compared directly. However, one essential point has been confirmed by all of these studies, namely, that the incidence of schizophrenia tends to be higher in blood relatives of schizophrenic

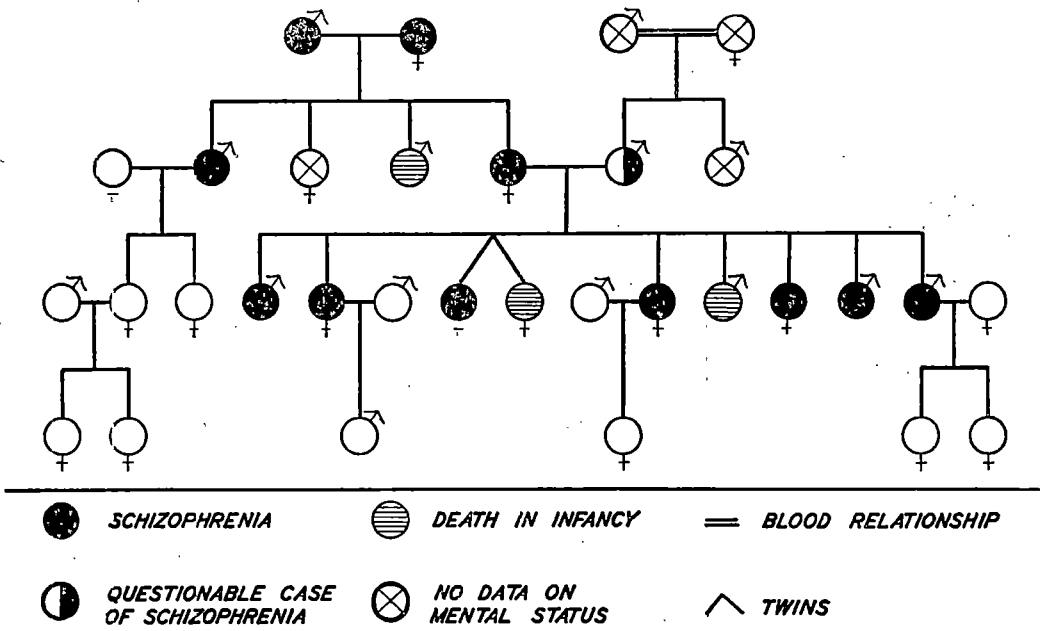


FIG. 1.—Pedigree of a family showing unusual accumulation of schizophrenic cases.

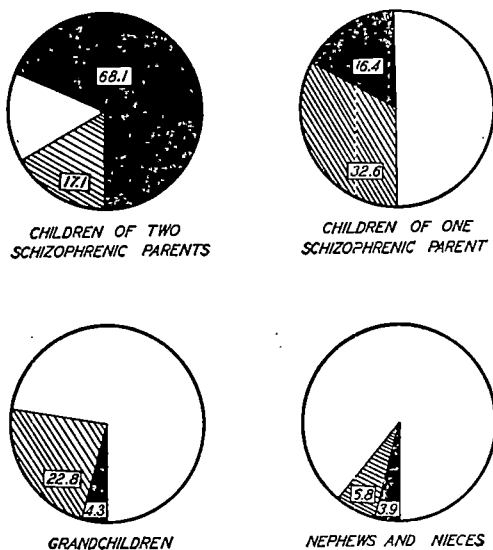
INCIDENCE OF SCHIZOPHRENIA IN GENERAL POPULATION	INCIDENCE OF SCHIZOPHRENIA IN CONSANGUINEOUS GROUPS RELATED TO:											
	ONE ORDINARY INDEX CASE OF SCHIZOPHRENIA							TWO ORDINARY INDEX CASES		ONE TWIN INDEX CASE		
	NEPHEWS AND NIECES	FIRST COUSINS	GRAND-CHILDREN	HALF-SIBLINGS	PARENTS	FULL-SIBLINGS	CHIL-DREN	CHIL-SIBLINGS	DREN	DI-ZYGOTIC CO-TWINS	MONO-ZYGOTIC CO-TWINS	
PREVIOUS MORBIDITY STUDIES OF KALLMANN	.85	3.9	—	4.3	7.6	10.3	11.5	16.4	20.5	68.1	12.5	81.7
RANGE OF MORBIDITY RATES OF OTHER INVESTIGATORS	.3 — 1.5	1.4 — 3.9	2.6	—	—	7.1 — 9.3	4.5 — 11.7	8.3 — 9.7	20.0	53.0	14.9	68.3

FIG. 2.—Schizophrenia rates obtained with the contingency method of statistical prediction.

phrenia, obtained with the contingency method, are summarized in Fig. 2. The rates refer to different population and consanguinity groups and may have been compiled with different degrees of statistical accuracy. The samples differ in size as well as in uniformity, and many of them seem

index cases than it is in the general population. Concerning the offspring of schizophrenic index cases it has been shown that their morbidity rates range from 16.4 to 68.1 per cent, that is, from nineteen to about eighty times average expectancy, according to whether one or both of their parents are

schizophrenic (Fig. 3). It is to be verified, therefore, that the chance of developing schizophrenia in comparable environments increases in direct proportion to the degree of blood relationship to a schizophrenic index case. If such evidence can be supplied, intransigent supporters of purely environmental theories should be expected to demonstrate with equally precise methods that a consistent increase in morbidity is found associated with particular environmental circumstances *in the absence* of consanguinity.



GENERAL POPULATION RATES:

■ SCHIZOPHRENIA = 0.85 PER CENT

▨ SCHIZOID PERSONALITY = 2.9 PER CENT

FIG. 3.—Expectation of schizophrenia and schizoid personality in descendants of schizophrenics.

In order to establish the hereditary nature of a psychosis beyond the possibility of random contingency and in relation to the interaction of predispositional genetic elements and various precipitating or perpetuating influences acting from without, the best available procedure is the *twin study method* in conjunction with an ordinary sibling study. Such a combination method³ has been adopted

³ A more detailed description of the method can be found in a previous report of F. J. Kallmann and D. Reisner, "Twin Studies on Genetic Variations in Resistance to Tuberculosis," *Journal of Heredity*, Vol. 34, No. 9.

in our long-range studies of specific behavior disorders and has been called by us "Twin Family Method" (Fig. 4). This approach provides six distinct categories of sibship groups reared under comparable environmental conditions; namely, monozygotic twins, dizygotic twins of the same sex, dizygotic twins of opposite sex, full siblings, half-siblings, and step-siblings. If the assumed genetic factor exists and the part played by the twinning factor is negligible, the statistical expectation will be that the morbidity rates for full siblings and dizygotic twin partners should be about the same, but they should clearly differ from the rates for the other sibship groups.

One-egg twins are expected to show the highest concordance rate for a genetically

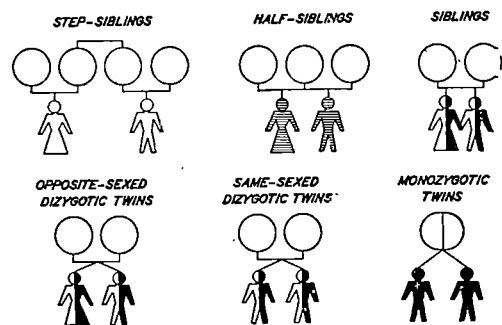


FIG. 4.—Degree of consanguinity in twin family method.

determined disorder, even if brought up in different environments. Two-egg twins may be either of the same or of opposite sex, but genetically they are no more alike than any other pair of brothers and sisters who are born at different times. Half-siblings with only one parent in common should be about midway between the full siblings and the non-consanguineous step-siblings, if the given morbidity depends on the closeness of blood relationship rather than on the similarity in environment.

In order to obtain statistically representative material for the application of this method, our survey was organized on a state-wide basis. The twin index cases (Fig. 3) were collected from the resident populations and new admissions of all mental hospitals under the supervision of the New York State Department of Mental Hygiene. The dan-

ger of bias on account of technical selective factors in the sampling of the material was avoided by referring the determination of the twin index cases to the staffs of the hospitals cooperating in the survey. The only criteria for selection were that the reported cases be born by multiple birth and that they had been admitted with a diagnosis of mental disease.

The classifications of both schizophrenia and zygosity were made on the basis of personal investigation and extended observation. The twin diagnosis was based on findings obtained with the similarity method, since it is known now that monozygotic twins are not necessarily monochoiral. The statistical analysis was limited to the families of

monozygotic and 517 dizygotic index pairs with schizophrenia in at least one member or, more precisely, 691 pairs constituted by 1,382 twins, of whom 794 were legitimate index cases. Of the dizygotic sets, 296 are same-sexed and 221 are opposite-sexed.

The excess of female over male index cases is almost 20 percent. The ratio of white to non-white index cases is about 14:1. Approximately 70 percent of the index cases are unmarried. The proportion of nuclear cases, characterized by hebephrenic or catatonic psychoses with the tendency to progression and deterioration, amounts to 68 percent.

The various groups of relatives included in the analysis of these 691 twin index fam-

	All schizophrenic twin index cases reported *							All complete index pairs studied †			
	Marital status		Racial distribution		Diagnostic distribution			Dizygotic			
								Monozygotic	Same sex		Opposite sex	Total number
	Single	Married	White	Non-white	Nuclear	Periph-eral	Total number				
Male	292	70	337	25	253	109	362	75	132	221	317½
										2	
Female	265	166	405	27	290	142	432	99	164	221	373½
										2	
Total number ..	558	236	742	52	543	251	794	174	296	221	691

* Without index cases whose cotwins were unavailable at the age of 15 years.
† The difference between 794 index cases and 691 index pairs is explained by the fact that in 103 pairs both twin partners were reported as index cases and acceptable as such.

FIG. 5.—Racial and diagnostic distribution of the twin index cases.

794 schizophrenic twin index cases whose cotwins were available for examination at the age of fifteen years. These index cases were reported within a period of nine years by twenty institutions, which in 1945 had a total resident population of 73,252 patients with 47,929 schizophrenics and 12,316 new admissions.

The random sampling of the 691 index pairs is indicated by the close correspondence between the statistically expected figure of 25.6 percent for the proportion of monozygotic twin pairs in an unselected American twin group, and the actual percentage of 25.2 as obtained with the Weinberg Differential Method for the present study. It is in accordance with expectation that the main deficit is on the part of dizygotic twins of opposite sex. Altogether, there are 174

ilies are identified in Fig. 6. There are 1,382 twins, 2,741 full siblings, 134 half-siblings, 74 step-siblings, 1,191 parents and 254 marriage partners of twin patients, making a total of 5,776 persons who have been uniformly classified according to their mental, social and genealogical conditions.

The collective schizophrenia rates for the different relationship groups are compared in Fig. 7. The variations in age distribution have been corrected by the use of the "Abridged Weinberg Method." The resulting morbidity rates are average expectancy figures valid for persons above the chief manifestation period, which in this study was assumed to extend from the age of fifteen to forty-four.

Regardless of whether the uncorrected or corrected rates are taken into account, they

are in definite accordance with genetic expectation regarding both schizophrenia and schizoid personality. The corrected schizophrenia rate for full siblings amounts to 14.3 percent, corresponding closely with the collective concordance rate for dizygotic twin pairs (14.7 percent), although it clearly exceeds the rate for half-siblings (7.0 percent). A comparison with our previous sibship figures reveals only minor variations which seem sufficiently explained by the different sampling procedures of sibship and descent studies. Our previous schizophrenia rates

comparison is limited to the groups of same-sexed dizygotic and separated monozygotic twin pairs (Fig. 8). Their morbidity rates vary from 17.6 to 77.6 percent, and this difference is still so pronounced that explanations on non-genetic grounds are very difficult to uphold. The total morbidity distribution as summarized in Fig. 8 is a rather clear indication that the chance of developing schizophrenia increases in proportion to the degree of consanguinity to a schizophrenic index case. The only other syndrome showing a significant increase in the index fam-

	Twins	Full siblings	Half-siblings	Step-siblings	Parents	Husbands and wives of index cases	Total number
Living	1,198	1,682	84	47	618	221	3,850
Dead	184	1,059	50	27	573	33	1,926
Total number	1,382	2,741	134	74	1,191	254	5,776

FIG. 6.—Number and relationship of the persons included in the survey.

		Relationship to schizophrenic twin index cases						
		Parents	Husbands and wives	Step-siblings	Half-siblings	Full siblings	Dizygotic cotwins	Monozygotic cotwins
Statistically uncorrected rates	Number of persons.....	1191	254	85	134	2741	517	174
	Cases of schizophrenia.....	108	5	1	4	205	53	120
	Incidence of schizophrenia*..	9.1	2.0	1.4	4.5	10.2	10.3	69.0
Corrected morbidity rates	Schizophrenia †	9.2	2.1	1.8	7.0	14.3	14.7	85.3
	Schizoid personality	34.8	3.1	2.7	12.5	31.5	23.0	20.7

* Related to all cases of schizophrenia and to all persons over age 15.

† Related only to definite cases of schizophrenia and to half of the persons in the age group 15-44 (plus all persons over age 44).

FIG. 7.—Incidence of schizophrenia and schizoid personality in the twin index families.

were 7.6 percent for half-siblings, 11.5 percent for full siblings, and 12.5 percent for dizygotic cotwins.

The newly obtained morbidity figures for step-siblings and marriage partners of schizophrenic index cases are 1.8 and 2.1 percent, respectively, showing a small excess over the general population rate of 0.85 percent. So far as this excess is statistically significant, it is referable to the effect of mate selection rather than an expression of socially induced insanity.

By contrast, the difference in concordance between two-egg and one-egg twin partners ranges from 14.7 to 85.8 percent. An almost equally striking difference remains, if the

families is that of schizoid personality changes, whose genetically heterogeneous nature has been discussed in previous reports.

Concerning the total morbidity rate of 85.8 percent for monozygotic cotwins it should be borne in mind that the figure expresses the chance of developing schizophrenia in a comparable environment for any person that has survived the age of forty-four and is genetically identical with a schizophrenic index case, but is not distinguished by the fact of having been selected as the child of such an index case. The last point needs particular emphasis, since it apparently explains the difference between the morbidity rates of 68.1 and 85.8 per-

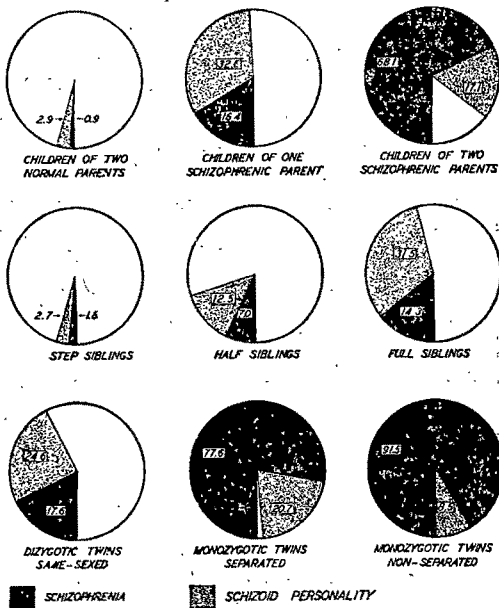


FIG. 8.—Expectancy of schizophrenia and schizoid personality in blood relatives of schizophrenic twin index cases.

schizophrenics must have had a chance of getting married and producing offspring.

According to our previous fertility studies (Fig. 9), the total reproductive rate of schizophrenic index cases is not more than about half that of a comparable general population. However, the decrease in fertility is much more pronounced in the nuclear group of schizophrenia, comprising the deteriorating types of hebephrenia and catatonia, than it is in the paranoid and simple cases. The consequence is that milder schizophrenic cases have a better chance of reproducing a schizophrenic child than have the more severe cases. If the children of one schizophrenic parent will often be the offspring of patients with lessened severity of their symptoms, the children of two schizophrenic parents may be expected to represent an even greater selection of potential schizophrenics in the direction of a highly resistant constitution. Obviously, such a process of natural selection does not

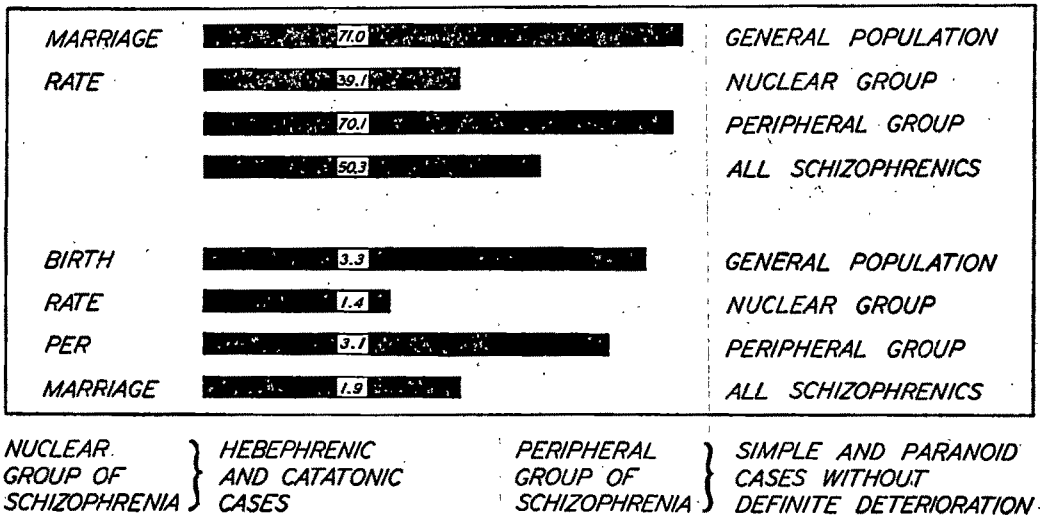


FIG. 9.—Marriage and birth rates of schizophrenic hospital patients.

cent as found for the children of two schizophrenic parents and for the monozygotic cotwins of schizophrenic index cases, respectively. In fact, it is only by a comparison of these two figures that a satisfactory estimate can be obtained of the extent of biased sampling in a morbidity study dealing with children of schizophrenic index cases. In order to provide such a sample,

operate in persons who have only the distinction of being the monozygotic cotwins of schizophrenic twin index cases.

Clinically it is very important that neither the offspring of two schizophrenic parents nor the monozygotic cotwins of schizophrenic index cases have a morbidity rate of 100 percent as would be expected theoretically in regard to a strictly hereditary trait. This

observation indicates a limited expressivity of the main genetic factor controlling schizophrenia, but it should not be misinterpreted in the sense that the extent of the deficit is an adequate measure of the part played by non-genetic agents in the production of a schizophrenic psychosis. From a biological standpoint, the finding classifies schizophrenia as both preventable and potentially curable. The implication is that the main schizophrenic genotype is not fully expressed either in the absence of any particular factor of a precipitating nature or in the presence of strong constitutional defense mechanisms which in turn are partially determined by heredity. The statistical difference be-

should be sought especially for a finding which is never accounted for by exponents of purely "cultural" theories of schizophrenia. This rather striking observation is that over 85 percent of our groups of siblings and dizygotic cotwins did *not* develop schizophrenia, although about 10 percent of them had a schizophrenic parent, all of them had a schizophrenic brother or sister, and a large proportion shared the same environment with these schizophrenics before and after birth.

For anatomical reasons, prematurity of birth, instrumental delivery and reversal in handedness are more common in twins than in single-born individuals. It is shown in

	SIMILARITY OF DELIVERY AND HANDEDNESS IN TWIN PARTNERS					DISSIMILARITY OF INSTRUMENTAL DELIVERY AND HANDEDNESS IN TWIN PARTNERS			
	NORMAL DELIVERY	PREMATURE BIRTH	INSTRUMENTAL DELIVERY	RIGHT- HANDEDNESS	LEFT- HANDEDNESS	INSTRUMENTAL DELIVERY IN		LEFT-HANDEDNESS IN	
						SCHIZO- PHRENIC TWIN	NON-SCHIZO- PHRENIC TWIN	SCHIZO- PHRENIC TWIN	NON-SCHIZO- PHRENIC TWIN
BOTH TWIN PARTNERS SCHIZOPHRENIC	79.6	14.3	4.1	72.1	2.5	2.0	—	25.5*	—
ONE TWIN PARTNER SCHIZOPHRENIC	76.2	15.4	4.2	81.8	0.9	2.4	1.8	8.2	9.1
ALL TWIN INDEX PAIRS	77.1	15.1	4.2	67.4	1.2	2.3	1.3	12.9	6.6

* OF 41 TWIN PAIRS IN WHOM ONLY ONE OF THE TWO SCHIZOPHRENIC TWIN PARTNERS WAS FOUND TO BE LEFT-HANDED, 33 PAIRS WERE MONOZYGOTIC.

FIG. 10.—Handedness and instrumental delivery in the twin index pairs.

tween observed and expected morbidity rates for unquestionably homozygous carriers of the schizophrenic genotype does not mean, however, that heredity is effective in only 70 to 85 percent of schizophrenic cases, or that it is essential merely to the extent of 70 to 85 percent in any one case.

In order to exclude the possibility that the entire difference in morbidity between monozygotic and dizygotic cotwins might be sufficiently explained by factors other than genetic, it is necessary to analyze the morbidity rates for the various sibship groups in relation to any developmental or environmental circumstances peculiar to twins and siblings. In this evaluation of significant similarities and dissimilarities in the life conditions of various relationship groups in our index families, a credible explanation

Fig. 10, however, that no one of these factors has any bearing on the occurrence of schizophrenia in persons who happen to be twins. There is practically no difference between concordant and discordant twin pairs in the frequency of premature birth (14.3-15.4 percent) or of instrumental delivery (4.1-4.2 percent). In discordant index pairs, over 82 percent are alike in regard to handedness, the vast majority (81.8 percent) being right-handed. In the unlike pairs, left-handedness occurs about as often in the non-schizophrenic twin partners (9.1 percent) as in schizophrenic twin index cases (8.2 percent). It is in accordance with expectation that most of the concordant twin pairs showing dissimilarity as to left-handedness are monozygotic.

The collective morbidity rates for the co-

twins are modified by a variety of secondary factors, genetic as well as non-genetic, but certainly not to an extent which would explain the marked difference between the two types of twins. Variation in relation to the sex factor cannot exist in monozygotic twin pairs and is of equally limited extent in the groups of siblings and dizygotic twins. The range of the former group is from 12.3 to 16.1 percent, and that of the latter group from 10.3 to 17.6 percent (Fig. 11). The difference in morbidity remains constant regardless of whether the siblings and cotwins are male or female. This sex variation is an indication that fraternal twins belonging to the same sex as a given index case have a greater chance of being alike in any particular circumstances which may favor the mani-

phrenic processes so complex and a carefully adapted program of constructive therapeutic measures so important. Many of our twin histories indicate that incidental factors such as pregnancy, intercurrent disease, or a reducing diet which may have been responsible for the crucial difference between health and psychosis in one twin pair, will not have the same vital effect in others.

The morbidity rate for monozygotic cotwins varies from 77.6 to 91.5 percent for those twin partners who were or were not separated for over five years prior to disease onset in the index twin (Fig. 12). It has already been emphasized that this statistical difference is no adequate expression of the relative effect of extraneous circumstances on the development of schizophrenia in genetically alike persons. Separation is no exact measure of dissimilarity in regard to environmental agents precipitating schizophrenia. There are numerous factors of potential etiological significance, which are practically universal. In fact, our group of separated one-egg pairs includes twins who developed schizophrenia at almost the same time, although their separation took place soon after birth and led to apparently very different life conditions.

Conversely, even with similar environment it cannot be expected that the time of onset of a schizophrenic psychosis in genetically identical persons will be exactly the same. It is shown in Fig. 13 that simultaneous occurrence of schizophrenia is found in only 17.6 percent of monozygotic twin pairs. In about one-half of the index pairs (52.9 percent) there is a difference of one month to four years, and in over one-quarter the difference may be from four to twelve years. Psychobiologically it is of interest to note that significant dissimilarities in symptomatology are observed only in twin partners who show a definite variation in age of onset.

The age discrepancies between twin partners remain about the same if the comparison is based on the dates of first admission. The average age at disease onset is 22.1 years for the index twins, and 25.6 years for the cotwins.

There are also certain differences in the period of time during which either the twin

	SIBLINGS OF TWIN INDEX CASES			DIZYGOTIC COTWINS			MONOZYGOTIC COTWINS		
	MALE	FEMALE	TOTAL NUMBER	MALE	FEMALE	TOTAL NUMBER	SEPA- RATED	NON- SEPA- RATED	TOTAL NUMBER
SAME- SEXED	15.9	16.3	16.1	17.4	17.7	17.6	77.6	91.5	85.8
OPPOSITE- SEXED	12.5	12.0	12.3	10.5	10.2	10.3	—	—	—
TOTAL NUMBER	14.0	14.5	14.3	14.3	14.9	14.7	77.6	91.5	85.8

FIG. 11.—Variations in the schizophrenia rates of siblings and twin partners according to sex and the similarity or dissimilarity in environment.

festation of the schizophrenic genotype. It is clear, however, that these sex variations are by no means extensive enough to permit a non-genetic explanation for the entire difference, or a major part of the difference, between the concordance rates of monozygotic and dizygotic twin pairs.

The main variations in the morbidity rate of monozygotic cotwins are apparently associated with age at disease onset, type of psychosis, and a variety of extrinsic factors causing significant changes in the physical development and general health status of one twin partner. Most of these modifications in susceptibility or resistance do not lend themselves to statistical analysis, and it is impossible here to enter into a discussion of individual twin histories. It is essential, however, to stress the great variability of such contingent influences, because it is this point which makes the etiology of schizo-

partners were under observation before they were classified as concordant or discordant as to schizophrenia, or during which the concordant pairs had been separated before the index twins developed their psychosis. A glance at Fig. 14 will reveal, however, that these differences are entirely insufficient to explain the variations in morbidity between one-egg and two-egg types of twins. The separated concordant twins had lived apart for an average of 11.8 years before disease onset in the first twin, and the discordant index pairs had reached a total average age of thirty-three years at the time

equally distributed among the discordant index pairs.. The ratio for all discordant pairs is 5.5:4.5, and that for monozygotic pairs alone is 6:4.

Additional evidence against a simple correlation between closeness of blood relationship and increasing similarity in environment with correspondingly intensified pressure toward development of a psychosis is obtained by an investigation of the distribution of concordance and discordance in similar and dissimilar environments in both groups of index pairs (Fig. 15). This analysis indicates that 22.4 percent of all monozygotic

	Separated * pairs	Non-separated pairs	Total number
Number of cotwins.....	59	115	174
Corrected morbidity rate of cotwins.....	77.6 ¹	91.5	85.8

* Separated for five years or more prior to the onset of schizophrenia in the index twin.

FIG. 12.—Concordance as to schizophrenia in separated and non-separated pairs of monozygotic twins.

	Average age in years			Percentage of twin pairs showing differences in age at onset of schizophrenia					
	First twin	Second twin	Difference between twin partners	No. difference	0.1-4 years	4.1-8 years	8.1-12 years	12.1-16 years	16.1-20 years
Onset of disease.....	22.1	25.6	3.5	17.6	52.9	18.6	10.8	..	..
First admission	26.0	30.3	4.3	26.5	38.2	21.6	7.8	3.9	2.0

FIG. 13.—Variations in the average age at disease onset and first admission of the monozygotic twin index pairs concordant as to schizophrenia.

	NUMBER OF INDEX PAIRS		AVERAGE DURATION IN YEARS		DISCORDANT PAIRS IN PER CENT	
	CONCORDANT	DISCORDANT	SEPARATION IN CONCORDANT PAIRS	DISCORDANCE IN DISCORDANT PAIRS	WITH SIMILAR ENVIRONMENT	WITH DISSIMILAR ENVIRONMENT
MONOZYGOTIC	120	54	11.1	8.5	61.1	38.9
DIZYGOTIC SAME-SEXED	34	262	12.9	12.5	57.3	42.7
DIZYGOTIC OPPOSITE-SEXED	13	208	13.8	11.1	50.5	49.5
ALL TWIN INDEX PAIRS	167	524	11.8	11.5	55.0	45.0

FIG. 14.—Distribution of concordance and discordance in twin index pairs in relation to disease onset and environment.

of their examination for this survey. All categories of cotwins had at that time been discordant for over eight years since the development of schizophrenia in the index cases.

It is more significant that similarity and dissimilarity of environment are almost

pairs are concordant without similar environment, and that 49.3 percent of all dizygotic twin partners remain discordant although they have been exposed to the same environment as an index case.

It may be of some interest that the concordance rate of monozygotic pairs varies from 65.0 to 71.1 percent according to dissimilarity or similarity of environment, while there is no corresponding increase in the dizygotic group (10.8—7.6 percent). There can be no doubt, however, that any such variation in relation to environment does not suffice to explain a ratio of 1:6 or 14.7:85.8 percent, as has been obtained for the morbidity rates of dizygotic and monozygotic twin partners.

That heredity determines the individual capacity for development and control of a schizophrenic psychosis is demonstrated still more clearly, if the similarities in ex-

tent and outcome of the disease are taken as further criteria of comparison. This is the objective of the remaining tabulations (Figs. 16-18) which compare the cotwin groups with completely and incompletely similar or dissimilar behavior to schizophrenia, instead of comparing the twin groups with and without psychotic symptoms as was done by the use of morbidity rates.

Complete similarity has been assumed

twins showed an extremely deteriorating type of psychosis. Such a difference does not occur in the group of monozygotic twins, but it ensues in about every sixth dizygotic pair under dissimilar environmental conditions (Fig. 17). This finding implies that the chance of a rapidly progressive psychosis (low resistance) is practically zero for a schizophrenic patient who is the monozygotic twin of, or genetically identical with, a per-

	COTWINS WITH SIMILAR ENVIRONMENT			COTWINS WITH DISSIMILAR ENVIRONMENT			ALL COTWINS		
	NUMBER OF COTWINS	RATE OF COTWINS IN PER CENT		NUMBER OF COTWINS	RATE OF COTWINS IN PER CENT		TOTAL NUMBER	RATE OF COTWINS IN PER CENT	
		CONCORDANT	DISCORDANT		CONCORDANT	DISCORDANT		CONCORDANT WITH DISSIMILAR ENVIRONMENT	DISCORDANT WITH SIMILAR ENVIRONMENT
MONOZYGOTIC	114	71.1	28.9	60	65.0	35.0	174	22.4	19.0
DIZYGOTIC	276	7.6	92.4	241	10.8	89.2	517	5.0	49.3
TOTAL NUMBER	390	26.2	73.8	301	21.6	78.4	691	9.4	41.7

FIG. 15.—Relationship between similarity or dissimilarity in environment and concordance or discordance as to schizophrenia in the twin index pairs.

	Concordant pairs in percent				
	Not separated	Separated-similar environment	Separated-dissimilar environment	Completely * concordant	Incompletely * concordant
Monozygotic	50.8	16.7	32.5	67.5	32.5
Dizygotic	42.5	2.1	55.3	6.4	66.0
All twin index pairs.....	48.5	12.6	38.9	50.3	49.7

* As related to the following four classifications:
Group I: No schizophrenia despite similar environment.
Group II: Schizophrenia with little or no deterioration (recovery).
Group III: Schizophrenia with medium deterioration.
Group IV: Schizophrenia with extreme deterioration.

FIG. 16.—Distribution of concordance in relation to similarity of environment and clinical course of schizophrenia.

when both twins either recovered from a mild psychosis with little or no defect (Group II) or reached about the same degree of medium (Group III) or extreme deterioration (Group IV). On the basis of this classification, complete concordance is found in 67.5 percent of the concordant one-egg twin pairs, but only in 6.4 percent of the dizygotic pairs (Fig. 16).

Complete dissimilarity means that the co-

twins developed no psychosis despite similar environment (Group I), while the index

son who remains free of schizophrenic manifestations under similar environmental circumstances. However, the chance of developing a very destructive type of psychosis is 1:3.5, if the person is merely the patient's sibling or dizygotic twin, which means that he is as likely to differ in the inherited elements for a satisfactory resistance as are two brothers or sisters.

In comparing the total groups with dissimilar and similar behavior to schizophrenia, incomplete similarity denotes a difference of

only one step between two of the four subgroups; and incomplete dissimilarity, a difference of two steps. This comparison yields a ratio of 3:55 for the monozygotic pairs, and a ratio of 3:1 for the dizygotic pairs.

frequent than dissimilar behavior in monozygotic twins, although dissimilarity predominates in dizygotic twin partners.

Fig. 18 expresses the same difference in resistance between one-egg and two-egg

Degree of resistance to schizophrenia	Clinical behavior to schizophrenia in twin index pairs				Number of twin pairs	
	First twin		Second twin		Monozygotic	Dizygotic
	Sub groups	Clinical classification	Sub groups	Clinical classification		
Complete dissimilarity	IV	Extremely deteriorating type of schizophrenia	I	No schizophrenia despite similar environment	0	91
	IV	Extremely deteriorating type of schizophrenia	Ia	No schizophrenia with dissimilar environment	0	62
Less complete dissimilarity	IV	Extremely deteriorating type of schizophrenia	II	Schizophrenia with little or no deterioration	9	21
	III	Schizophrenia with medium deterioration	I, Ia	No schizophrenia (regardless of environment)	0	197
Complete similarity	II	Schizophrenia with little or no deterioration (recovery)	II	Schizophrenia with little or no deterioration	19	2
	III	Schizophrenia with medium deterioration	III	Schizophrenia with medium deterioration	33	0
	IV	Schizophrenia with extreme deterioration	IV	Schizophrenia with extreme deterioration	29	1
Less complete similarity	II	Schizophrenia with little or no deterioration	I, Ia	No schizophrenia	54	120
	III	Schizophrenia with medium deterioration	II	Schizophrenia with little or no deterioration	20	14
	IV	Schizophrenia with extreme deterioration	III	Schizophrenia with medium deterioration	10	9
Total number of pairs	All dissimilar pairs.....				9	371
	All similar pairs.....				165	146
	Grand total.....				174	517
Ratio	No schizophrenia to extremely deteriorating schizophrenia.....				0 : 174	1 : 2.5
	Dissimilar resistance to similar resistance.....				3 : 55	3 : 1

FIG. 17.—Variations in resistance to schizophrenia in the twin index pairs.

The difference in similarity of resistance between the two types of twins is expressed by a ratio of 1:55, which far exceeds the difference found in their original morbidity rates. In other words, similar behavior to schizophrenia is about eighteen times more

twins in rates rather than in ratios, identifying less complete and complete dissimilarity in behavior to schizophrenia with favorable and very favorable resistance, and similar behavior in the deteriorating subgroups with insufficient resistance. In the

monozygotic group, five out of 100 cotwins of schizophrenic index cases show a tendency to favorable resistance and none shows very favorable resistance, if their twin partners are insufficiently resistant. In the dizygotic group, however, favorable resistance is seen in seventy-two out of 100 cotwins of insufficiently resistant index cases, and very favorable resistance in about 30.

This finding indicates that *constitutional resistance* to the main genotype of schizophrenia is determined by a genetic mechanism which is probably non-specific and certainly multifactorial. Taking into account

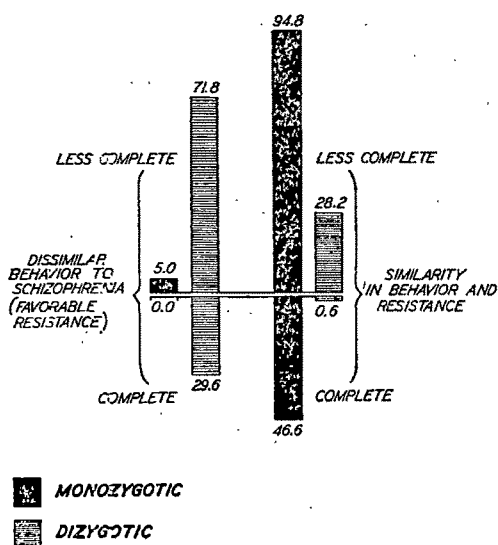


FIG. 18.—Rates of similar and dissimilar resistance to schizophrenia.

the results of biometric investigations, there is reason to believe that this constitutional defense mechanism is a graded character and somehow correlated with the morphological development of mesodermal elements. For various reasons it does not seem likely, however, that the genetic mechanisms controlling susceptibility and lack of resistance to schizophrenia, that is, the ability to develop a schizophrenic psychosis and the inability to counteract the progression of the disease, are entirely identical with each other. If they are identifiable, it is possible without qualification to accept the recent suggestions of Penrose and Luxenburger that inheritance of schizophrenia may be "the result of many factors."

As far as the *specific predisposition* to schizophrenia is concerned, that is, the inherited capacity for responding to certain stimuli with a schizophrenic type of reaction, the findings of the present study are conclusively in favor of the genetic theory. Our conclusion is that this predisposition depends on the presence of a specific genetic factor which is believed by us to be recessive and autosomal.

The hypothesis of recessiveness is borne out by the taint distribution in the ancestry of our index cases and by an excess of consanguineous marriages among their parents. Of 211 twin index pairs without schizophrenia in their known ancestry, twelve sets (5.7 percent) originated from consanguineous parental matings. Of the remaining index pairs, 95 were found to have a schizophrenic parent; 283 had no schizophrenic parent, but schizophrenic cases in the collateral lines of ancestry; and in 102 pairs the available information about the ancestors was considered inadequate. This excess of consanguineous parental marriages in the present survey appears quite convincing, even if a part of it may be due to the fact that our index cases are twins.

Psychiatrically it should be evident that the *genetic theory of schizophrenia* as it may be formulated on the basis of experiment-like observations with the twin family method, does not confute any psychological concepts of a descriptive or analytical nature, if these concepts are adequately defined and applied. There is no genetic reason why the manifestations of a schizophrenic psychosis should not be described in terms of narcissistic regression or of varying biological changes such as defective homeostasis or general immaturity in the metabolic responses to stimuli. Genetically it is also perfectly legitimate to interpret schizophrenic reactions as the expression either of faulty habit formations or of progressive maladaptation to disrupted family relations. The genetic theory explains only *why* these various phenomena occur in a particular member of a particular family at a particular time.

The general meaning of this genetic explanation is that a true schizophrenic psychosis is not developed under usual human

life conditions unless a particular predisposition has been inherited by a person from both parents. Genetically it is also implied that resistance to a progressive psychosis does not break down without certain inherited deficiencies in constitutional defense mechanisms, the final outcome of the disease being the result of intricate interactions of varying genetic and environmental influences. Another genetic implication is that a schizophrenic psychosis can be both prevented and cured. The prerequisite is that the psychosomatic elements, which may act as predispositional, precipitating or perpetuating agents in such a psychosis, are morphologically identified, and that the complex interplay of etiologic and compensatory mechanisms is fully understood. Pragmatic speculation will be no aid in reaching this goal.

SUMMARY

1. The methods available for genetic investigations in man are the pedigree or family history method, the contingency method of statistical prediction, and the twin study method.

2. A study of the relative effects of hereditary and environmental factors in the development and outcome of schizophrenia was undertaken by means of the "Twin Family Method." The study was organized with the cooperation of all mental hospitals under the supervision of the New York State Department of Mental Hygiene. The total number of schizophrenic twin index cases, whose cotwins were available for examination at the age of fifteen years, was 794.

3. In addition to 1,382 twins, the 691 twin index families used for statistical analysis include 2,741 full siblings, 134 half-siblings, 74 step-siblings, 1,191 parents, and 254 marriage partners of twin patients. The random sampling of these twin index pairs is indicated by the distribution of 174 monozygotic and 517 dizygotic pairs, yielding a ratio of about 1:3.

4. The morbidity rates obtained with the "Abridged Weinberg Method" are in line

with the genetic theory of schizophrenia. They amount to 1.8 percent for the step-siblings; 2.1 percent for the marriage partners; 7.0 percent for the half-siblings 9.2 percent for the parents; 14.3 percent for the full-siblings; 14.7 percent for the dizygotic cotwins; and 85.8 percent for the monozygotic cotwins. This morbidity distribution indicates that the chance of developing schizophrenia in comparable environments increases in proportion to the degree of blood relationship to a schizophrenic index case.

5. The differences in morbidity among the various sibship groups of the index families cannot be explained by a simple correlation between closeness of blood relationship and increasing similarity in environment. The morbidity rates for opposite-sexed and same-sexed two-egg twin partners vary only from 10.3 to 17.6 percent, and those for non-separated and separated one-egg twin partners from 77.6 to 91.5 percent. The difference in morbidity between dizygotic and monozygotic cotwins approximates the ratio of 1:6. An analysis of common environmental factors before and after birth excludes the possibility of explaining this difference on non-genetic grounds.

6. The difference between dizygotic and monozygotic cotwins increases to a ratio of 1:55, if the similarities in the course and outcome of schizophrenia are taken as additional criteria of comparison. This finding indicates that constitutional inability to resist the progression of a schizophrenic psychosis is determined by a genetic mechanism which seems to be non-specific and multifactorial.

7. The predisposition to schizophrenia, that is, the ability to respond to certain stimuli with a schizophrenic type of reaction, depends on the presence of a specific genetic factor which is probably recessive and autosomal.

8. The genetic theory of schizophrenia does not invalidate any psychological theories of a descriptive or analytical nature. It is equally compatible with the psychiatric concept that schizophrenia can be prevented as well as cured.

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FAMILY MENTAL DISEASE IN PRIVATE PRACTICE¹

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Every subject acquires a revised meaning and importance with the advance of knowledge. This is particularly true of the subjects of heredity and constitution in their relationship to the mental diseases. The newer therapeutic measures, especially prefrontal lobotomy, that marvel of direct scientific treatment, the shock methods, the newer drug therapeutics, the use of the vitamins and, although I say this with less emphasis, the limited success of certain psychotherapeutic procedures, have brought about this state of affairs—that *more of the mentally sick have remissions and thus an increased community life and consequently, a greater possibility of marriage and reproduction than ever before.*

Now then, if there is a hereditary basis to the depressive states, to cite one important group of cases, and unless these methods cure the germplasm or whatever inherent brings about this type of mental disease, then the net result is not good for mankind and constitutes what has been called *cacogenics*. I have seen many cases in which, following electric shock treatment, a remission occurred in a depression and the individual, especially if a woman, married and had children. If there is a heredity to depression, then the electric shock remission is a cacogenic effect, and the real result, although useful temporarily for the individual, is not fundamentally useful or good for the race; and medicine thus has become increasingly open to the reproach that it keeps alive the unfit and permits their propagation.

At the present time it cannot be said that we *cure* any of the more important and more fixed mental diseases. The best that the shock treatments do is to produce remissions or changes in the character of the mental diseases. I think it would be a grossly optimistic point of view to say that actual

cure is obtained in the vast majority of cases. It may well be that in the long run no very great change is produced in the history of the case, even though these methods deserve great credit and are, at least temporarily, enormously useful. Nor is there evidence that prefrontal lobotomy, which soon will occupy the center of the therapeutic stage, cures the germplasm. At the best, it is not likely that, if there is a hereditary background to these diseases, the germplasm has been altered in any fundamental way. The liability for propagation has been increased, which is a long-term liability, *if*, and only if, these diseases have a hereditary basis. I emphasize this *if*, because the most that can be said is that it seems likely that there is a heredity to these diseases, first, on the basis of what is observed and, secondly, on the important general basis that there is a heredity to everything else; that heart disease, arteriosclerosis, the liability to cancer have a constitutional and hereditary basis as well as environmental sources. Of course, it must be emphasized that germplasm or hereditary mechanisms are not inaccessible to the environment, and that at all times environment and hereditary substances operate in reciprocal relationship so that gross changes can be produced in hereditary substance by the operation of environmental forces. This is a well established fact and, indeed, the whole concept of heredity is changing due to the work of many men in the genetic field. There has even been recently established a Foundation for the study of the heredity of personality which, I believe, deserves our attention even though we know that personality becomes enormously modified by environmental forces.

The difficulties of human study in the field of genetics are enormous, especially in the field of psychiatry. The term *family* is fallacious as meaning a common stock, since every individual has millions of ancestors whose qualities may appear in the individual,

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despite the fact that they seem absent in the immediate ancestors and siblings. Moreover, very little is known of any family, and the family history as usually obtained is a tissue of misinformation, concealment, evasion, ignorance, and as many other terms of this kind as one wishes to use. An ancestor, a mother may have a mental disease; the daughter may have a similar or differing mental disease; but the father, although unknown as the basis for the psychopathic constitution, may sooner or later show up as an agent to be considered. In other words, all human studies labor under great difficulties, and the tremendous interweaving of stocks and the role of coincidence interpose great handicaps, which cannot be solved in any short-term study.

There is further the law of *anticipation* or *antedating* to complicate the matter. This is the law, if one wishes to use such a term, by which a family history is only finished with the death of all its members, since it is common for a current family history to be negative when the first member appears in view, and then ten years later the mother or father is seen or an older sibling comes to attention. Just as the individual life, according to a Greek philosopher, could never be declared good or fortunate until it is ended, so no family history is negative for mental diseases until all its members are gone.

In this study of the families of a private practice, which is not in any sense thorough or complete, only those cases have been counted as positive, in which either two or more members are known personally to me as patients, and/or when hospital records were obtained as part of the family history of the cases. This study thus excludes the cases in which the immediate family history as given is positive for mental disease, but in which no records could be or have been obtained. A cursory study of our cases shows that this group is even larger than the included families. Moreover, these family cases thus selected are limited to (1) parents and siblings, and (2) siblings. This, of course, is not at all complete as a genetic study and may exclude the larger number of cases, since many observers, especially in the case of schizophrenia, think that the line

of descent is more frequently by collaterals than by direct relationship.

The reasons for thus limiting the study are, first, that few people really know much about uncles, aunts and cousins; and secondly, new genetic factors are introduced in such immeasurable amounts as to bring about, when the family is greatly extended, more confusion than more fact. Even when the history is limited to the known members as thus delimited, the role of coincidence cannot be excluded, since it may well be that some other genetic factor or even environmental circumstance is responsible. *A schizophrenic mother or father creates a psychopathological home which may well be a factor in producing mental disease in a descendant if environmental circumstances and conditioning are of importance, which they undoubtedly are. Indeed, society itself is definitely psychopathic or anti-biological in many ways. Fundamental drives are frustrated, delayed and diverted from the cradle to the grave by the social forces which operate through custom, religion, education and general social moulding and in a way comparable to the Pavlovian experiments by which animals are conditioned into neuroses and psychoses.* To cite only one phase of this social psychopathology and ambivalence, the desire and satisfaction of the most primitive types of drives are constantly being obstructed, perverted and destroyed by obsolete and ancient ideas of morality, worthiness and legality.

This paper thus will discuss the hereditary factors in my private practice in epilepsy, feeble-mindedness, the so-called functional psychoses, and the major neuroses. The epileptic cases are limited to so-called idiopathic types, and feeble-mindedness as considered here excludes cretinism, mongolism, and the organically conditioned defects of intelligence.

Not to anticipate the results at this point, it may be said that in the case of epilepsy and feeble-mindedness, the results are strikingly different from those of the neuroses and especially the psychoses, and are in sharp contradiction to much of the literature concerning epilepsy and feeble-mindedness. To supplement the situation in epilepsy and feeble-mindedness, I have gathered statistics

from other sources than my own practice to act as a sort of control.

It may be asked, in what way does a private practice study of these conditions differ from state hospital or institutional data? In the first place, the great majority of the so-called neuroses do not reach the mental hospital in any considerable measure, whereas they form a great part of private practice, so that if there is any familial connection between the severe neuroses and psychoses, it does not become manifest in any convincing way in the work which emanates from state hospitals. Furthermore, the milder cases of mental disease, such as the recurrent depressions, also remain out of the ken of the institutional psychiatrists but form a considerable part of the practice of the private physician. The evolution from a neurosis to a psychosis is practically never seen in the state institutions. It is relatively common in private practice.

The private practice in consideration is not a collection of the rich. Only the very lowest financial classes are under-represented. Farmers, laborers, mechanics, small and big business men, professionals of all types from the high to the low appear. Only the negroes are under-represented, but with this conspicuous exception all races, creeds and colors are included, with some over-emphasis in the case of the Jews, the Irish and the Italians. The reasons for this are, first, the race of the writer which brings to him a larger proportion of Jews than would otherwise come, but also the fact that the patients mainly come from New England, where a larger part of the Irish-Americans are found and a great proportion of Italians as well.

The technique of collecting these data is very imperfect and, therefore, the statistics represent very much less than the true involvement of the families. I have stated some of the reasons before, but it is well to put them together at this point. In the first place, the unsupported family history, even though reliable, is not accepted as authentic. Secondly, the law of anticipation-antedating makes the proportion of cases much less than a later period would. In other words, in the most of the cases the family history is by no means complete. Thirdly, there is

much misinformation and concealing. It has happened very frequently that the family history was declared negative, when a longer acquaintance with the family brought out the fact that another member had been in a state institution following child-birth or some such circumstance, which was supposed to exclude true mental sickness. And in many instances deliberate concealment took place which only came to my knowledge when some chance remark of a relative brought out the involvement. It is interesting to compare my family histories with those of some of the institutions which have sent me records of some member of a family whom I was studying. In an extraordinarily large number of cases amounting, I think, to more than 50% the family history was declared negative, when there already existed definite mental disease.

EPILEPSY

One hundred consecutive cases of epilepsy were studied, of which 56 were males and 44 females. Of these there were 11 which were associated with feeble-mindedness and consequently were excluded. There were 12 cases which were finally established as due to organic brain disease. There were 3 more cases in which there had been considerable likelihood of organic brain disease which, however, was not definitely established by study. There is thus a standard proportion of organic disease as a basis for epilepsy. There remained 77 cases of so-called idiopathic epilepsy, and by the criteria of this study, namely, cases of father, mother and siblings which had been seen by me, and/or of which I had records, there was only one family in which there was familial epilepsy.

There were only 2 cases with other conditions, such as a marked neurosis or psychosis, in which the individuals either appeared as my patients or had obtainable records. The family history as *given* includes 8 other types of mental disorder. When these are broken down, they are extremely scattered and, I believe, have no further significance insofar as the epilepsy is concerned. Thus, one brother committed

suicide in a depression; a maternal aunt was in an institution with cerebral arterial disease; a father had encephalitis; one brother had an agitated depression, etc. Of the 2 family cases known to me, the brother of one epileptic had an agitated state from which he recovered and did not have epilepsy. The father of another had a typical encephalitis and the patient's sister had a psychoneurosis. This is certainly not an impressive family record. Of course, if one included all the social and biological diseases of mankind, such as diabetes, tuberculosis, vagrancy, kidney disease, criminality, headache, etc., as has been done in the older literature, all the cases would probably have to be classed as familial mental disease, but so would the family of the writer and of everyone who reads this paper.

Confining ourselves to epilepsy itself, the record is impressive by its negative results and this, I think, is as it should be when one considers the fact that in no other condition known to psychiatry can the environment be evoked as a causal agent, both experimentally and in the march of events, as in the case of epilepsy. Convulsive attacks can be produced and are produced for therapeutic purposes by insulin, metrazol and electric shock. Any drug given to excess may bring about fits, and so with hyperventilation, although this is said to rest on an epileptic basis. Any organic disease of the brain, whether accidental, infective or due to drug poisoning, such as alcohol, may have associated convulsions. All animals have convulsions. It seems to me likely, therefore, that the convulsive states have no great dependence upon heredity or constitution, unless the constitution be developed during the life history of the individual. This, of course, is in sharp contradiction to the work of Lennox and his associates, who, I think, lean too heavily on the electroencephalogram. It is also in marked contrast to the older data on the subject and to some of the recent work as well, but this older work has rested on a polymorphous approach to the problem. All kinds of conditions, including severe headache, have been classified as forms of epilepsy or as indicating constitutional taint. It is as if in studying tuberculosis, one were to consider as *like* conditions from the

heredity standpoint bronchitis, asthma and hysteric cough. The tremendous contrast between the very few families that I have seen, in which epilepsy occurred in siblings and parents or amongst siblings, and such diseases as schizophrenia and manic-depressive psychosis will make the point much stronger.

It is interesting to note that at an institution for the epileptics, there were relatively few family groups as compared, for example, to the number of family groups at the institutions for mental disease or for feeble-mindedness. Thus, I have the figures of the Monson State Hospital (Palmer, Mass.) which unfortunately are not at all exact but represent the best that Dr. Robinson, the clinical director, can do for me at this time. He states that of 1485 patients at that institution, there are probably 12 which represent families made up of siblings or of parents and siblings. This proportion is almost within the range of coincidence, since there is a considerable amount of epilepsy in the community, and certainly does not bear out the idea that there is a strong hereditary or constitutional factor in epilepsy. I hope to have more complete data on this matter in the future.

Feeble-mindedness

Practically speaking, there has been only one opinion of any consequence in the literature concerning feeble-mindedness, namely, that when one excludes the organic cases and the cretins, mongols and imbeciles, heredity, and especially familial heredity, plays the most important rôle. The classical studies are too well known to be cited here and have played an important part in the shaping of cultural thought on the matter. Now and then, some one like myself has challenged the authenticity of the Nams, the Jukes and the Kallikaks, and I have been in more than one controversy in the matter, taking the attitude that if these were cases of real feeble-mindedness, they were exceptional and did not by any means present a true picture of feeble-mindedness.

In previous writings I have stated, and this has also been the opinion of Dayton, that the number of familial cases of fee-

blemindedness in non-institutional groups is very much less than the familial cases in institutions. It will be seen by Dayton's figures that there is twice as much hereditary feeble-mindedness in the institutional group as in the public school group. This, I think, is exactly what one would expect. Institutional groups like the Wrentham State School and the Walter E. Fernald School would seem necessarily to represent a collection of the worst families, because defective families are not so able to care for defective children as are less defective families. In other words, institutional groups would logically be loaded by the social circumstances, and the amount of hereditary defect in institutions should not be a true index of the true familial state of feeble-mindedness. Some facts which I present contradict this earlier idea.

There were 75 current cases of feeble-mindedness, of which 47 were males and 28 females. Fourteen of these cases had associated epilepsy and 14 cases had organic brain disease or injury as apparent etiologic bases. Excluding these 28 cases, there were 47 current cases of feeble-mindedness in which there were only 2 cases with a proven family history of feeble-mindedness by those criteria which I have used in this study, namely, either one parent or one or more of the proband's siblings was feeble-minded as established by my own records or those of an institution. Of course, this will exclude other cases, but the same will be true and more so of similar cases of psychoses and neuroses. In the case of feeble-mindedness the parent is already immune from feeble-mindedness and so are the then living siblings, since feeble-mindedness exists from birth by definition, and in this way the statistics of incidence become much more certain than those of the neuroses and psychoses in which the individual is not immune until death, no matter at what age that may take place.

Therefore, the statistics I am presenting are far more striking and conclusive than the statistics later to be cited of the psychoses and neuroses. *In other words, in a community practice feeble-mindedness tends on the whole to be sporadic and not greatly associated with familial feeble-mindedness.* Of

the known cases of other diseases associated with the cases of feeble-mindedness, the scattering indicates there is no real relationship. Thus, I had seen or had records of such conditions: grandmother and mother had a neurosis; father developed a delusional state; sister had a psychoneurosis. In some histories of other cases, which were not authenticated by personal study or by records, the following appeared: suicide in the immediate ancestry; manic-depressive in a paternal uncle; a paternal grandfather had involutional melancholia; a sister had dementia praecox. These scattered conditions are certainly not more prevalent in these cases of feeble-mindedness than in the normal families, which really do not exist if we spread the net of relationship far enough and include all kinds of mental disturbance. *Mental disease, I think, is a sprinkle everywhere. In the case of some families it becomes a shower.*

In some previous publications I studied the incidence of feeble-mindedness in families mainly from the standpoint of psychoses present. In the case of the studies on familial feeble-mindedness published in 1930, my colleagues and I studied the amount of mental disease in the ancestors and relatives of the feeble-minded and came to the conclusion that there was no biological relationship between feeble-mindedness and the major psychoses and neuroses.

At any rate, so far as actual feeble-mindedness is concerned in this study, these 47 individuals—and this is also true of the 28 cases associated with epilepsy and organic brain disease—came from the high, the low, the rich, the poor, the brilliant and the mediocre. It may be that these cases are hereditary in the sense that they are of germplasm or developmental origin. They seem to me to be more related to what may be called "sports" or early blastophoria than the usual hereditary characters. In so far as these families are concerned, there was no special abnormality to them aside from these individual cases.

The statistics from the Devereux Schools, (Devon, Pa.) speak for themselves:

The number of feeble-minded, as compared to the total school population, is usually about 50 to 55%, and at the present time there are 221 defectives in

the entire school. There are two sets of siblings in the school at this time, one a brother and sister, the other half-sisters. . . . I am sorry to say that it is impossible to say with certainty the exact number of siblings who have appeared at Devereux, compared to the total number of children who have been trained in the school, but it would certainly be much less than one-half of one per cent.

Parent-sibling groups would logically not appear in a private school. Yet if there were a strong familial tendency, many siblings would appear. The sporadic nature of much of feeble-mindedness stands out in this and private practice statistics.

I have two studies from school systems, one by Dayton and one gathered at my request by Helen F. Cummings, director of special classes, City of Boston. Dayton's work is committed to the belief that the amount of heredity in the genesis of feeble-mindedness is much less in the school systems than in the institutions for the feeble-minded. He states, "Heredity, as recorded in the 3,553 school clinic examinations, reveals that feeble-mindedness is present in one or both parents in approximately 7% of the cases, mental disease in approximately 3% of the cases, and epilepsy in 1% of the cases. The comparison in heredity made with cases in the Wrentham State School seems to indicate that the inheritance of mental defect is more obvious in institution cases than in school clinic cases."

The figures from the state institutions which Dayton used were collected by my colleagues and myself from the Wrentham State School and the Walter E. Fernald State School. However, the recent figures do not clearly substantiate this statement. Of the 1900 pupils in the special classes in Boston at the present time, there were 138 families representing 304 individuals or nearly 16%. These 304 siblings had 213 siblings who were in the regular graded classes, showing that even in this worst group there was still a considerable portion of normality. The statistics in this group do not include, of course, the parents of the feeble-minded and older siblings, which would bring the percentage up, so that it would correspond on the whole to that of the institutions for the feeble-minded.

It may well be, therefore, although this is by no means certain, that the schools for the

feeble-minded really do represent a cross-section of the community with the exception of those individuals who go to private schools or who remain at home cared for in special ways. This probably represents a large segment of the feeble-minded, since at all times a large proportion is not in institutions. It is interesting to note also that there are about 70,000 school children in Boston at this time and the known number of defectives is 1900, which is less than 3% of the total. This does not make quite so grim a picture as is usually stated in the literature.

I have some statistics from the Wrentham State School, kindly sent me by Dr. C. Stanley Raymond. Of the 6093 cases admitted to the Wrentham State School up to December of 1945, there were 794 individuals who belonged to family groups. These were divided as follows:

- 305 families with 2 individuals represented.
- 45 families with 3 individuals represented.
- 9 families with 4 individuals represented.
- 1 family with 6 individuals represented.
- 1 family with 7 individuals represented.

Data sent me from the Walter E. Fernald State School through the kindness of Dr. Malcolm J. Farrell showed the following: On March 31, 1946, there were 1985 patients with 96 families contributing 213 individuals or about 11% of the population.

Figures from the Belchertown State School, furnished through the courtesy of Dr. Henry A. Tadgell showed the following: On April 6, 1946, there were 1487 individual cases of feeble-mindedness with 129 families contributing 319 individuals or about 22%.

The percentage of known familial cases in state hospital groups is undoubtedly much higher than is shown by the above figures. For example, father-sibling groups do not appear, which merely means that the fathers were not known or did not become locally institutionalized.

Elsewhere I have criticized at great length the classical concept of feeble-mindedness as involving generation after generation and whole groups and segments of a community or population. It seems incredible that people have taken seriously the Kallikaks, the Jukes and the Nams. All they had to

do to blow these publications into complete oblivion was to study the families of the feeble-minded in the state hospitals and to consider the statistics of the school system, the private schools and private practice. It is time that the whole concept of feeble-mindedness as occurring in many members of the same group and as persisting for generations was thrust into the limbo of the forgotten and misleading.

There are many facts which indicate that a good deal of feeble-mindedness is of hereditary origin, but that much represents physical and cultural deficiency, the physical deficiency representing impaired or defective conditions of life possibly starting in the uterine environment, and the cultural those pressing on the individual from the beginning of life in an environment deficient in the stimulators of intelligence, which needs use to develop its full capacity of function just as much as the muscles do. But this need not be taken up at this point; nevertheless, it is an important theme.

FUNCTIONAL PSYCHOSES

GENERAL REMARKS

Some general remarks on the incidence of familial mental disease in the following groups of cases must be made. In the first place, diagnosis is fallacious and perilous. There are cases in which we can say without any qualification, this is schizophrenia. There

Total schizophrenics		
Male	Female	Total
88	132	220

are other cases, running a definite cycle, recurring in classical manner, in which we can without reserve make the diagnosis of manic-depressive psychosis. There are atypical cases, however, in which it is difficult even over a long period of observation to reach a very definite conclusion as to diag-

nosis. This does not alter the fact that there is schizophrenia and there is manic-depressive psychosis, and these terms are names for different conditions. Unfortunately, as I have elsewhere pointed out, different clinicians have criteria which in one institution will bring about an enormous percentage of schizophrenia, whereas in a neighboring institution with practically the same population represented, there will be a disproportionate amount of manic-depressive psychosis. This has been definitely the case in Massachusetts in such neighboring institutions as the Boston Psychopathic Hospital, the Boston State Hospital and the Worcester State Hospital.

Moreover, it is well known that there may be a neurosis-like beginning to many of the mental cases that later become classified as psychoses. I have many such histories in my own experience. When one studies the severe neuroses, and this paper is concerned only with such cases since I rarely see the minor types, one finds a jumble of anxiety, somatic disturbance, obsessive compulsive reactions and hysteric manifestations in one and the same individual at the same time or in different stages of the evolution of his mental disorder.

SCHIZOPHRENIA

The statistics on the constitution and heredity of schizophrenia are:

Schizophrenics with family history		
Male	Female	Total
24	27	51 (23%)

Family Distribution:

Mother-sibling.....	21
Father-sibling.....	7
Sibling-sibling.....	29

Disease distribution:

	Similar	Dissimilar
Mother-sibling.....	10	11
Father-sibling.....	5	2
Sibling-sibling.....	21	8

In other words, in this group of 220 consecutive cases there was 23% in which definite familial mental disease was established by personal knowledge and record. Since there was at least an equal number of cases in which familial disease was noted in the family history but the patients involved had

not been seen nor had any record been obtained, it seems quite certain that familial mental disease occurs in at least 50% of schizophrenics, if one takes into further account the fact that the families had not disappeared and that further mental disease would naturally occur in some of the cases

I have included in the group of schizophrenic states the definite schizoid states and those marked paranoid states which were not alcoholic or organic origin and which represent cases which, I believe, in the main belong to schizophrenia.

Of these 51 cases of schizophrenics with

GENERAL STATISTICS

	Total diagnostic group			Cases with family history		
	Male	Female	Total	Male	Female	Total
1. Manic-depressive	42	107	149	21	46	67 (47%)
2. Schizophrenic states	88	132	220	24	27	51 (23%)
3. Severe neuroses and anxiety states.....	172	297	469	28	24	52 (12%)
4. Schizo-affective states	4	5	9	1	—	1 (11%)
5. General psychopathic states.....	43	18	61	5	4	9 (15%)

SEX DISTRIBUTION

Diagnoses	Total	M	F	Mo-Sib	Fa-Sib	Sib-Sib	Similar conditions	Dis-similar conditions
Manic-depressive	67	21	46	22	8	42	Mo-Sib 19	3
							Fa-Sib 4	4
							Sib-Sib 23	21
							—	—
							46	28
Schizophrenic states.....	51	24	27	21	7	29	Mo-Sib 10	11
							Fa-Sib 5	2
							Sib-Sib 21	8
							—	—
							36	21
Severe neuroses and anxiety states	52	28	24	26	11	15	Mo-Sib 10	15
							Fa-Sib 5	8
							Sib-Sib 8	8
							—	—
							23	31
Schizo-affective states.....	1	—	1	—	—	—	Sib-Sib 1	
General psychopathological states	9	5	4	1	4	4	Mo-Sib 0	1
							Fa-Sib 0	4
							Sib-Sib 2	2
							—	—
Totals	180	78	102	70	30	90		7

in which as yet no such incidence was recorded. In other words, if one takes into account the fact that this mental disease may occur at different times of life, that one individual may have schizophrenia at 16, a brother or sister at 40, and a parent at any age, it becomes clear that the records which can be obtained at any time represent a lesser incidence of familial mental disease than would constitute the true situation.

family history the proband was male in 24 cases and female in 27 cases. The mother-sibling relationship occurred in 21 cases. The father-sibling relationship occurred in 7 cases. The sibling-sibling relationship occurred in 29 cases. The totals, therefore, are more than 51, which is understandable since these inter-relationships overlap throughout. This preponderance of the mother-sibling group is also present in

manic-depressive psychosis and is explained by a fact well known in the literature, namely, that mentally sick mothers have a higher marriage rate than mentally sick fathers, the reason for this being obvious in that, first of all, the male has to make a living which the mentally sick individual is rarely capable of doing. The sexual drive is diminished in most of the mental diseases and especially of the schizophrenic and depressive groups; and since marriage is largely dependent on the sexual drive of the male rather than that of the female, there is sufficient reason for the greatly lowered marriage rate of the male schizophrenic.

Similar psychoses occurred in the mother-sibling group in 10 cases; in the father-sibling group in 5 cases and in the sibling-sibling group in 21 cases, making a total of 36 cases in which schizophrenia or allied conditions appeared in all the individuals involved. In 11 mother-sibling cases the mental conditions were dissimilar. In the father-sibling group 2 were dissimilar, and in the sibling-sibling group 8 represented different mental states.

When the similar and dissimilar groups are studied, one thing seems quite clear—that it is in those cases which are more certainly schizophrenic that the similar mental disease occurs in the close relative. It is exactly in those cases in which the diagnosis is to some extent doubtful that dissimilar psychoses appear. In the main, the dissimilarity of these cases was in regard to manic-depressive psychosis or, at any rate, the depressive states. There were a few cases of severe neuroses, some of which were social anxiety states which I believe are related to schizophrenia. I have defined the social anxiety state as that in which the individual finds his greatest difficulty in the contact with other individuals and becomes greatly disturbed somatically and psychologically to the point of disability, excluding thus mere shyness or transitory stage-fright conditions. Such a family is here briefly mentioned in which one brother and one sister were classed as schizophrenia and were in institutions, while the two siblings in the community had severe social anxiety states with retreat from activity and general disability largely springing from their in-

capacity to meet other people with equanimity or ease.

In these dissimilar cases the following fact must be taken into account, there is a bilaterality of heredity. A mother may have manic-depressive psychosis. The children may present the symptoms of schizophrenia. When a study is made of the paternal side, although no individuals have reached institutions, strong indications of at least a schizoid temperament are found. This is the case in several instances in these cases of mine. The ostensible family history is one thing; the complete family history is another, and under the conditions of this research there was no possible way of ascertaining the true state of affairs. I shall deal with this matter in my recommendations.

It is commonly stated in the literature that the relationship of schizophrenia is more frankly collateral than direct; that is to say, aunts and uncles are more involved than parents, and cousins should be included in any study which deals with heredity. Unfortunately, such studies could not be done in this research. Moreover, while in several instances cousins and aunts or uncles were known to be involved by mental disease, I excluded them because the history of the uncles, aunts and cousins is imperfectly known by most families, and the statistics are too spotty to be of value. On any basis the percentage of known mental disease was high and of similar mental disease great enough to be beyond coincidence and definitely indicating a strong constitutional trend in schizophrenia.

DEPRESSIVE STATES

In the case of the depressive states, as is well known there is more mental disease of similar type than in any other condition. This is borne out in my statistics shown on page 332.

The cases with divergent diagnoses in the direct relatives were dementia præcox, constitutional psychopathic inferior, schizoid state, marked anxiety state, marked psychoneurosis, criminal deviation (1 case), psychosis with arteriosclerosis (1 case) and obsessive compulsive state.

The same general statement which was made in the case of schizophrenia applies

Total depressives		
Male	Female	Total
42	107	149

Depressives with family history		
Male	Female	Total
21	46	67 (47%)

Family distribution:

Mother-sibling.....	22
Father-sibling	8
Sibling-sibling.....	41

Disease distribution:

	Similar	Dissimilar
Mother-sibling.....	19	3
Father-sibling	4	4
Sibling-sibling.....	23	21

to the manic-depressive cases. Where the proband was clearly manic-depressive or, at least, presented a clearcut depressive state, the relatives, that is, brother, sister, mother and father, son or daughter, were almost universally classified as depressive states. Where, however, the diagnosis was not clear, where the patient had not been seen long enough or where even after long observation there were atypical features, dissimilarity—so-called—appeared in the relatives. The bulk of the cases classed as dissimilar were diagnosed as schizophrenia, a smaller percentage as severe psychoneuroses, with an occasional chronic alcoholic and constitutional psychopath.

The cases are too few for an elaborate statistical study. The general trend, however, is conspicuous and clear. Here we may again be dealing with bilateral heredity, that is to say, the dissimilar cases may possibly be due to traits and characteristics belonging to an unknown ancestor, but this is mere speculation and occasions only an exercise of ingenuity rather than depending on anything corresponding to proof.

SEVERE NEUROSES AND ANXIETY STATES

Of the total of 469 cases seen in this group during this period, 172 were male probands and 297 female probands. The cases with definite family histories of the type herein considered were 28 males and 24 females, the total being 52 or 11%.

I am not considering the heredity of the neuroses in this paper. In the first place, they are too widespread and too common for the group that any one psychiatrist sees to be representative or to be statistically valid. It will be seen that the percentage

is far less than what one sees in the manic-depressive states or the schizophrenics. On the other hand, it is far greater than in the case of epilepsy or feeble-mindedness. Moreover, the given family history, not the known family history, would multiply the number of cases by at least two and, in fact, when one gets to know any family long and well enough, the percentage of neurosis reaches almost 100. However, the same might be true if one took any normal individual and collected with detail and circumspection his family history.

All one can say at this time is that the situation cannot be cleared up in respect to the major neuroses by any short study and perhaps not at all under present day circumstances and with our current "understanding" of the neuroses.

GENERAL PSYCHOPATHIC STATES

The same is true of those cases which I have here labelled general psychopathic states, by which is meant character anomalies of one type or another, including sexual deviation, criminal conduct and the like. Such individuals numbered 61 as probands. The relatives known to me numbered 9, which made a percentage of about 15. Deviations in character are too common and too infrequently come to the attention of the psychiatrist for statistics of any validity to be gathered except by a long-time research.

DISCUSSION

I am, therefore, confining my discussion to epilepsy, feeble-mindedness, the depressive states and schizophrenia.

Epilepsy.—In private and in hospital practice familial incidence is rare in epilepsy. Regardless of the similarity or dissimilarity

of brain waves, it seems to me to be much more likely that environmental factors are more directly responsible for epilepsy than the constitutional state. A constitutional predisposition may exist, but this is most certain of everything that happens to the human being or, for that matter, to any living thing. Whatever happens must be "happenable," to coin a word. If a stone falls on a skull, it is much more likely that the skull will be fractured than the stone. If the stone falls on sheet-iron, it is very likely that the stone will be fractured and not the sheet-iron. The fracturability of the skull pre-exists before the skull can be fractured. This is said in no flippant manner. The question arises, Is the predisposition of such extreme nature that it is mainly responsible for the condition which occurs? Thus, in certain diseases of bone, any trauma will fracture a bone. Such a fracture we may attribute to the fragility of the bone rather than to the environmental circumstances. On the other hand, any bone can be fractured by a severe enough blow. This kind of fracture we must attribute to the environment.

So it seems to me permissible to say at this time in respect to epilepsy, that in the main it is created by exogenous factors and can be reduplicated in anybody by exogenous factors, such as drugs, injury, infection, trauma, tumor and the like, and that there probably is no such thing as idiopathic epilepsy, a statement which has been made by many others. All one can say is that the larger group of epileptic cases remain of unknown origin after all the studies we can make are carried out to completion. The fact that monozygotic twins tend to have the same brain waves and also develop epilepsy in a considerable percentage of cases would be expected, since both the constitution and the environmental happenings are about the same in most cases of monozygotic twins.

Feeble-mindedness.—Of this condition it can clearly be stated that in private practice—and this is true of a very much larger group than the one I have cited—feeble-mindedness tends to be an isolated feature occurring in all kinds of families and relating usually to only one member of the family group. This is true, but to a lesser degree,

when one studies families in a public school system. The percentage of families rises, but not at all to the extent one would be led to believe, if one took into account the classical family groups so often cited in the literature which have misled both psychiatrists and the public at large for at least two generations. The percentage is much greater than that found in private practice, but it does not equal the percentage I have seen in private practice in the statistics of schizophrenia or manic-depressive psychosis.

When one comes to the institutions the percentage rises still further but embraces only in the last analysis a small proportion of the cases in the institutions. One only occasionally sees large numbers of one single family in an institution for the feeble-minded. The studies that have been done in the public institutions have not been complete. They have usually taken into account the degree of defect rather than the cause of defect. But so far as they go, they indicate a hereditary trend towards feeble-mindedness, but one which appears either in isolated family groups as a conspicuous factor or in individuals isolated from the rest of the family by mental defect, the rest of the family corresponding on the whole to the average of the community.

Depressive States.—When one turns his attention to the depressive states, a totally different picture at once appears. There is a very high incidence of family disease. Even when one excludes uncles, aunts and cousins whose incidence would have to be taken into account in preparing any Mendelian scheme of the inheritance of the depressive states, the proportion is appalling. When one takes into account the further fact that this mental disease may occur at any time of life and that at no time does one reach the full incidence of the disease in any family group, then the percentage obtained even in this study is conclusive for a familial trend of great importance. In other words, the incidence is so great that to neglect the constitutional factors is fraught with danger to the race, in that it is just these conditions which are the more treatable, which respond more to electric shock and other treatment, including psychotherapy; and that unless there is com-

bined with treatment a eugenic effort, psychiatry may do more harm than good to the human race.

Schizophrenia.—In lesser degree the same statements may be made of schizophrenia. The constitutional factor, even excluding the dissimilar conditions which may come from other ancestors and from other stocks, argues strongly for at least a constitutional factor in schizophrenia, if not a hereditary one. The fact that other workers have laid more stress on collateral ancestors makes the situation more grim in its genetic outlook.

RECOMMENDATIONS

I believe that the time is ripe for some suggestions for, let us say, a nation-wide study of the family incidence of mental disease. I was quite shocked in writing around to various institutions, first, to discover how poor their family histories were. In many instances my own records, collected without the aid of a social worker and by no other means than my own inquiry and the acumen of my secretary, disclosed much more familial disease than was obtained in an institution with social workers, resident staff and long-resident patients. Surely, when patients are confined for a long time in a hospital and there is a continuum of clinical study together with the opportunity for social investigation, records of familial incidence should be a routine part of the statistics of the institution. In no psychiatric institution to which I wrote did I find any familial division of cases which made possible an easy assembly of the familial incidence of mental diseases.

It is, therefore, recommended that special attention be paid for at least a generation to the gathering of facts concerning familial incidence of the mental diseases in custodial hospitals, in out-patient divisions, and in private practice. If this is done on a large enough scale and over a long enough period of time, the facts can be assembled in statistically valid numbers and with sufficient clarity of purpose to make conclusions possible on this all-important subject.

It would be better still to establish a national institute for the study of heredity in the mental diseases. This institute ought to operate for at least fifty years before

the facts it could assemble would be of sufficient volume and validity to justify national and drastic action, or to state contrariwise that constitution and heredity played little or no role in the genesis of the various mental diseases. I do not believe that the latter would be the answer given by such a study.

It may be that our present classification and understanding is insufficient and that the categories into which we divide the mental illnesses have not enough substance behind them for a correct analysis of the value of environmental and hereditary forces in the creation of the mental diseases. The fact that most neuroses do not respond well to shock treatment while depressive states do is indicative of a sharp division between the biology and psychology of the depressive states and the neuroses. It may be that surgical operation, such as prefrontal lobotomy, will lead to new classifications according to results obtained. What is still more likely and still more hopeful is that tests of an objective kind will appear, so that we can classify the mental diseases by something much more clearcut than the impressions gained through psychological and other tests. It is much more satisfactory to have chemical and spinal fluid changes as indicative of general paresis than to depend on whatever psychological changes the patient presents. It is not likely that we will have this kind of pathology to give us our direction in the differential diagnosis of other and more baffling mental diseases; but I think it very likely that more subtle tests, yet to be evolved, will be of importance and give us a basis for understanding the constitution and heredity of these diseases.

All this need not deter us from looking more closely into the environmental bases of these mental diseases. As I have stated before this, all cats look grey in the dark, so that where little is known, much may be blamed on heredity, as was the case before the cause of tuberculosis became known. For example, the effect of the first great environment of man, the uterus, in producing deviation is utterly unknown, and no one has sufficiently followed the fate of the children born of difficult labor. The physiological exigencies are relatively simple; the psy-

chological pressures and distortions are complicated beyond words. Yet while what one experiences needs attention, the fundamental and inherited nature of the experiences must play a great rôle. What happens is important; to whom it happens is equally laden with destiny.

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INSULIN THERAPY AND ITS FUTURE¹

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Having kept an insulin-shock unit active for over nine years we are thinking of the future. The unit is an expensive one. Does it pay? Doctor Nolan Lewis' paper(1) on the value of shock therapy in general has been used as a stimulus to our own thinking on this particular problem.

An idea which is probably accepted by everyone without much thought but which has startling implications is that the brain is the only organ of the body which feeds exclusively on sugars. It is further noteworthy that the actual metabolic rates of the various subdivisions of the brain decrease as the neuraxis is descended. In the light of Hughling Jackson's(2) conception of the phyletic organization of the central nervous system, which postulates that the newer phyletic and higher anatomic portions of the brain regulate and control the older and lower portions, and in view of the Pfister and others'(3) conclusion that in schizophrenia there is a disorder of the autonomic nervous system involving the entire organism, we are going a long way in removing insulin therapy from the realm of the purely empirical, and putting it on a firmer physiological basis. That Sakel's discovery should have hit directly at these principles is a most remarkable and fortunate coincidence. It must be admitted, however, that we are perhaps yet a long way from understanding the *modus operandi* of the response and often recovery of schizophrenic patients undergoing insulin therapy.

The discussion naturally begins with a description of the technique and the results. In the years 1936 to 1938 the aim was to produce stupor with the least possible dosage and the least number of convulsions. In the years 1939 to 1944 deeper and longer stupors were achieved by increasing the dosage and regarding convulsions as helpful inci-

dents of therapy(4). Our present therapy is simply more refined in detail.

As it is now being given, a course of insulin shock treatments consists in roughly 30 to 60 stupors, given daily 6 days a week, without interruption until the end of treatment. The daily treatment is begun at 7 a.m. when the fasting patient is given his predetermined dose of insulin, either intramuscularly or intravenously, depending on certain indications. The dose of insulin for all patients is determined individually and adjusted daily according to reaction.

We are still experimenting with dosage procedures. Recently we have been obtaining encouraging results by using a rapid increase method, beginning with a dose of 50 units. Depending on reaction, we may increase the dose on successive days by the near-geometric progression of 100, 200, 400, 600, 800, and up to 1600 units. The dose is levelled off at the point where the initial stupor occurs within 3½ hours after the injection. After deep stupors have been achieved, the dose is then dropped equally rapidly to determine the minimum coma dose or insulin. From this point onward, the minimum amount of insulin required to produce deep stupor is given daily. This method has the effect of inducing coma very early, even in insulin resistant cases, and apparently at the same time inducing rapid sensitization to hypoglycemia and, most important, changes in the patient's mental symptoms very early in treatment. We would not recommend this method for use by other than a skilled therapist, but we shall discuss fully the details of our departure from custom in dosage in a forthcoming paper.

The dose is so adjusted that the patient goes into a stupor by 9 a.m. The stupor is allowed to continue for a maximum of two hours and is interrupted sooner only if signs of dangerously deep coma warrant. ("Stupor" is measured from the time the patient can no longer be consciously aroused and includes the term "coma"). The deepest

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possible stupors consistent with safety are induced daily and no "light" stupors are given. Routinely the stupor is interrupted by administration of 50 c. c. of 25% glucose intravenously, followed by a palatable drink of Karo syrup, lemon juice and water. This drink contains roughly sufficient carbohydrate to balance the insulin dose administered, calculated on basis of 2 grams of carbohydrate to 1 unit of insulin. The patient is given a full breakfast in bed and then allowed to return to his room to spend the remainder of the day in the usual hospital program of occupational therapy, hydrotherapy, etc. Selected music before and after stupor is a regular part of the insulin program in our unit.

Routinely, patients are given vitamin supplements to their diet which, with the exception of breakfast, is regular hospital fare. Also, fluid intake is limited throughout the day to a maximum of 1500 to 2000 cc.

Electroshock or metrazol convulsions are administered to patients in combination with insulin stupor in courses of about 3 to 12 treatments, to roughly half of all cases treated. This is usually given near the end of the course of insulin therapy in those cases who are not quite well, or show no improvement from insulin therapy alone. The patient is allowed a day's rest after a convulsion, no matter what its origin.

Besides psychiatric examinations enabling a diagnosis of schizophrenia to be established, and careful physical and neurological examinations, preparation for the treatment consists of a routine electroencephalogram, a fasting blood sugar, and roentgenograms of the chest and lateral thoracic spine. We also do intravenous pentothal interviews with each patient in an attempt to establish the value of this procedure in estimating prognosis with insulin therapy. An electrocardiogram is done only if indicated by physical findings. Also before coming to treatment the patient is given small doses (5 units) of insulin daily for a week to test for unusual sensitivity to hypoglycemia, as well as allergy to insulin.

Contraindications to insulin shock therapy diminish in number and gravity as we become more experienced with the therapy.

For such a physiological form of treatment there should be few, if any, absolute contraindications. Actually, however, the risks are greater in those individuals who have serious heart, liver or kidney disease, in those who have convulsive disorders, in diabetics, in those who have no superficial veins accessible and in those over forty-five years of age. Pregnancy, *per se*, is no contraindication. Presence of tuberculosis or other infection is, of course, a definite contraindication.

Psychotherapy for patients who go to an organized insulin unit has taken a form determined by the circumstances. Patients hear of the special treatment not only from their physicians but from the nurses and other patients; they see for themselves its good results in patients who have been through it and returned to the wards. In the unit they receive much attention; are on special diets; are impressed by the medico-surgical proceedings; and they are recipients of special nursing attention all day. Apparently the insulin—the hypoglycemia—produces the first psychological change in the patient: "Things seem to clear; a veil was taken away; I felt myself part of the world again." Of course many patients do not take this step. If they do, they at once feel the interest and satisfaction of the unit's physician and later on, returning to their rooms, they meet the interest and often enthusiasm of nurses and fellow patients. Interviews with the physicians assigned to the study of each patient before and during and after treatments allow fantasy to be understood and help the patient look forward. Most patients who first change with insulin seem to gain by these interviews, but it must be said that some who do not seem to be affected at all by psychotherapy go on to full recovery.

A resemblance to "total push" is suggested by the patients' schedule, but something is added.

Undoubtedly insulin shock is a drastic treatment and many complications can occur. In a series of 400 patients there were 4 deaths, but it is noteworthy that there have been none in the past four years.

The principal complications of the treat-

ment that we have encountered in order of importance are:

- A. Those which may result in death:
 - 1. Prolonged or irreversible stupor.
 - 2. Respiratory complications.
 - 3. Circulatory complications.
 - 4. Intracranial hemorrhage.
- B. Less serious complications:
 - 1. Convulsion of epileptic type.
 - 2. Transient cardiac abnormalities.
 - 3. Nausea and vomiting.
 - 4. "After shock."
 - 5. Insulin allergies and anaphylaxis.
 - 6. Neurological symptoms.
 - 7. Organic mental reactions and confusion states.

Prolonged or irreversible stupor has accounted for approximately one-half of all insulin deaths. Its treatment is not nearly so important as its prevention, and in this we have been extraordinarily successful of late. Of the last 75 patients treated, covering an 18 months' period, we have had none, despite our deep stupor levels. We attribute this record to close observation of patients, the routine use of intravenous glucose for awakening, and the routine limitation of fluids throughout period of treatment. We treat the condition, immediately it is diagnosed, with intravenous sucrose or sorbitol, thiamin chloride, and concentrated human plasma, as described by Rivers and Rome(5).

In reporting our results in the next paragraphs suggestions made by Dr. Nolan Lewis are followed as far as possible. Statistics are given only on those patients diagnosed as schizophrenic.

In the first place patients were selected for this treatment for many different reasons, as will be seen below.

(a) There were 11 patients who were 12 to 16 years old at the time of insulin treatment. Of these 9 had some indications of schizophrenia since childhood (seclusiveness, eccentricity, suicidal impulses) and the outlook was considered hopeless before treatment started: none of these showed any gain. In the other 2 the early childhood history was negative or fairly good and the results follow. A girl of 15 had year-long remissions after two series of insulin treat-

ments and one of electric shocks. A boy of 16 was not improved under insulin but six months later was reported recovered after metrazol.

(b) There were 62 patients who had a clear history of unbroken illness for more than 4 years before treatment. In many cases insulin was urged "as a last resort," often by relatives. A very poor prognosis was given for this group which was justified by results, although there were some surprises.

Of these patients 36 showed no gain at all; 8 showed slight improvement. Eight others showed remissions respectively of 1 month, 2 months, 10 months, 18 months, 1 year, 2 years, and 4 years duration. Four patients were greatly improved and are now self-supporting. One patient improved after insulin and recovered a year later to remain well. Five patients made recoveries which they have held.

Nearly 25% of good results at the end of treatment and 16% of well maintained good results was a better outcome than was expected.

(c) There were 133 patients in whom overt symptoms had been observed by the family for less than 18 months before the use of insulin.

Of these patients 27 showed no gain at all and 15 showed slight improvement. Another 29 had good remissions followed by relapses; and still another 4 had remissions, relapses and other remissions after a second course of insulin. Then 4 patients unimproved by insulin recovered later. There were left 52 who made recoveries and held them without incident.

In this group there appeared 63% of good results at the end of treatment and 39% of maintained good results.

(d) A rather surprising effect was seen in those cases which showed an intermittent onset; to the families these patients showed sporadic outbursts of psychosis interrupted by times of apparently normal behavior. There were 39 of these with 24 remissions at the end of treatment, or 61%. Of the 24 remissions 9 relapsed but 2 patients not recovered at the end of treatment recovered later.

Any detailed study of the pre-psychotic

personality leads into too many complicated tangles to be of use at this time. However, 20% of the patients were characterized as having been either "sociable, extroverted or able to get on with other people." Again it was unexpected to find that this apparently favored group at the end of the insulin treatment showed only 43% recovery rate.

Of 309 schizophrenic patients treated over a 10 year period in an insulin unit 48.8% were recovered or much improved at the end of treatment, 47% at the end of the next 30 days, 43% at the end of the first year, and 37% at the end of five years.

This compares to a recovery-much improved rate of 16% for control cases under hospital treatment without insulin or other shock treatment.

The more remarkable consistently held recoveries follow: "For 6 years on civilian air transport, arranging transportation—two promotions." "For 6 years teaching, more outgoing and generally better than ever before in his life." "For 8 years teaching and interested in social activities." "Seven years of successful life as army officer and as engineer." "In 7 years has had good health, been married, had a baby, lost her husband in service, surmounted all difficulties." "In charge of large hospital." "Did well in a Japanese prison camp."

The one patient in whom neurological damage could be seen developed convulsions and tremor of one hand about a year after the last insulin treatment, but this patient had had 16 metrazol shocks before entering our unit and had a series of electric shocks after leaving our hospital.

As we look over our results, we come to the conclusion that an insulin unit is not too expensive to continue for the next few years. The striking fact that the good responses to treatment are immediate deserves more emphasis than it gets. Even the transitory improvements seen in very chronic patients in the middle of treatment are medically important and of great help to other patients.

The modifications of technique which we have worked out will be continued as they seem to provide more safety.

In the future we should prefer to treat patients in the first 18 months of their illness and especially those in whom there is an overt or concealed paranoid trend, but we shall have to treat others less promising. We shall need the more active collaboration of a physiologist, a bio-chemist, and a more intensive study of the psychological reaction of the patients to such stimuli as the approach of coma and the occasional nearness to death.

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JAPANESE NEUROPSYCHIATRY¹

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In general, Japanese medical standards are inferior to those found in the United States and Britain. Physicians are not well trained; hospitals and public health projects are not as well organized or as modern. During the last five years, the Japanese have shortened their medical course from four to three years, and have been turning out doctors who, they admit, are inferior, even by their standards.

In psychiatry, in particular, Japan is far behind the United States. Their practice has developed largely under German influence, and it is still dominated by the teachings of Kraepelin and Bleuler. General practitioners are not well oriented in psychiatric problems and consultations in this specialty are far less frequent than in the United States. This does not mean, however, that the Japanese are totally unaware of or indifferent to psychiatric problems. As far back as 1900, they passed the law of Custody of Insane Persons, which provided that the insane be either confined in institutions or, if they remained at large, be under the custody of guardians appointed by law. In 1919, the Mental Disease Hospitalization Law was passed, requiring local prefectural governments to establish and maintain hospitals for the mentally ill.

At the beginning of the present war, the home islands of Japan had 143 mental hospitals with a total bed capacity of 21,883. A number of these hospitals were private and went out of existence during the war. No accurate figures are available on the number of hospitals that are now in operation, but it is estimated that it is less than one-half the pre-war figure. These statistics apply only to civilian hospitals and not to the military which will be discussed later.

Exact information regarding the incidence of mental disease is difficult to obtain. Many

cases undoubtedly remain in the community undiagnosed and unreported. Schizophrenia and manic-depressive psychoses apparently have the same relative incidence as in the United States, although manic cases may be less frequent. General paresis is more common and accounts for about 22 percent of all admissions to mental hospitals.

It is the impression of Japanese psychiatrists that psychoneuroses occur among their civilians approximately as they do in the United States and Britain. The exact manifestations of psychoneuroses were not determined in detail. However, it can be said that they included a high incidence of psychosomatic complaints. Also, conversion hysterias are apparently more common, although the Japanese use this term to include a number of other conditions. Neurasthenias also occur in limited numbers. Psychopathic personality is a recognized condition.

Epilepsy and mental deficiency are not regarded as special problems and separate hospitals for such cases are not provided. The Japanese have a law for sterilization of mental defectives; however they do not enforce it very rigidly. There more attention is paid to the individual desires of parents than one would expect in a totalitarian state.

SOCIETIES

The most important is the Japanese Association for Psychiatry and Neurology which, before the war, was composed of approximately 1,000 members. A journal was published monthly but was discontinued during the war.

There is also a Mental Hygiene Association with a membership of approximately 800 including not only psychiatrists but welfare workers, teachers, police and government officials. Their journal was also suspended during the war.

Other organizations include small associations for psychoanalysis and the study of conditioned reflexes.

¹ Read at the 102d annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

MEDICAL SCHOOLS

The two leading medical schools of Japan are located in the Imperial and Keio Universities in Tokyo, and these were visited to learn something about the program for psychiatric education.

The neuropsychiatric set-up at Imperial University was organized as the so-called Brain Research Institute. This institute was divided into three departments: neuroanatomy, neurosurgery, and psychiatry. The entire institute was under the direction of the professor of psychiatry, Dr. Yoshi Uichimura.

The department of anatomy was devoted to the gross and microscopic study of the brain and nervous system. It was housed in a separate building, and its facilities included a rather extensive collection of human and comparative neuroanatomical material. It served the same purpose as the division of neuroanatomy in other medical schools. While some research has been done in the past, its main function at present is teaching first year medical students.

The department of neurosurgery was located in the main surgical clinic and appeared to have no connection with the department of psychiatry except in name as part of the Brain Research Institute. The work of this department is essentially beyond the scope of this report.

The department of psychiatry was housed in a separate building which superficially bore some resemblance to the general set-up at such teaching clinics as Phipps and Payne-Whitney in the United States. The wards accommodated approximately 80 patients, who were admitted chiefly for teaching purposes. This building also housed a number of conference rooms, lecture rooms, laboratories and a library.

The psychiatric teaching program at Imperial University included a first year course in brain anatomy and physiology of approximately twenty hours. In the third and fourth years the students were given a course in clinical psychiatry, which included lectures, demonstrations and some practical work on the wards and in the outpatient clinic. The number of hours was somewhat variable, depending on the student's own interest. Apparently the work in the fourth year is partly on an elective basis, and the stu-

dents interested in psychiatry can spend considerable time in that field.

Dr. Uichimura reported that in normal times there were approximately 40 psychiatrists on the staff, but that during the war this number was reduced to 14.

The psychiatric department at Keio University was under the direction of Dr. Schichiburo Uyematsu who had had training at Harvard and Johns Hopkins. Keio University, unlike Imperial, had suffered destruction of many of the buildings due to bombing. The psychiatric building had been entirely destroyed and the department had been reduced to some 15 beds on the general medical ward and a few offices in the main building. Nevertheless, it was the impression, not only of the writers, but of all the medical officers who visited the two universities, that the work at Keio was generally superior to that at Imperial. The psychiatric staff at Keio had originally consisted of some 30 psychiatrists but was reduced to about 10 during the war. The course was also reduced from four to three years.

The psychiatric teaching program at Keio began in the second year with fifteen hours devoted to general psychiatry which consisted of etiology, general pathology of mental disorders, and psychopathology. In the third year, thirty-five hours were devoted to special psychiatry, which included a detailed description of the various types of neuroses and psychoses. Also included in the third year was a ten hours course in mental hygiene, which was sub-divided into eugenics, legal aspects of sterilization, mental hygiene of childhood and forensic psychiatry. In normal times, the fourth year included forty-five hours of clinical demonstrations of actual psychiatric cases and work on the wards. During the war this was cut to twenty-five hours and was given the third year.

Both Drs. Uichimura and Uyematsu seemed to be fairly familiar with the general principles of American psychiatry up to about the time of the war. They both knew all about the psychiatric set-up in the U. S. Army during the first World War, and were quite emphatic in saying that the Japanese Army had nothing comparable to it in the present conflict. They felt that, in general

Japanese civilian psychiatry was at least twenty years behind the United States.

There are certain rather marked differences between the practice of psychiatry in Japan and the United States which are worth noting. For example, clinical psychologists were not used at all, although both universities maintained departments of psychology. Apparently the psychologists there were rather jealous of their own prerogatives and did not wish to cooperate with the psychiatrists. The Japanese were familiar with our Army Alpha tests, Binet and other standard psychometric tests, as well as the Rorschach. However, all such tests had to be carried out by the psychiatrists themselves. The Japanese had no psychiatric social workers or other personnel comparable to them.

The Japanese system of internships and residencies was somewhat indefinite and much less formal than ours. For example, in Japan, when a medical student graduates, he makes a rather informal arrangement with the chief of service to work in that department. There is no regular appointment or time limit. The recent graduates seem to function somewhat as our internes do except that they do not live in the hospital. They do have an arrangement whereby at least one of them sleeps in the hospital every night on a rotating basis. This informal association with the hospital may end in a year or two or may go on for a number of years, until the individual considers his training complete and goes to another hospital or into private practice. In the latter case, he may continue his association with the hospital indefinitely. It should be emphasized again that such associations are entirely informal. The only physicians whose names appear in the university catalogues are the full professors and a limited number of full-time associates. During the period of training or "internship," the physician is first occupied with taking care of ward patients and working in the outpatient clinic. As time goes on, if he shows sufficient promise, he is given an opportunity for research and to assist the older men with teaching.

The nursing course in Japan covers two years, and two years of formal education—something like high school instruction—are

required before applicants are accepted. During the two years the nurses receive three to six months of psychiatric training, depending upon the hospital. Japanese nurses in general, however, do not occupy quite the same position either socially or professionally that our nurses do. They do not enter into the psychiatric treatment program as they do in most of our psychiatric hospitals, nor do they keep case records or notes as our nurses do. Certain Japanese nurses are trained in public health work and some of them do work which closely approximates that of our medical social workers, but this function apparently has not extended into the psychiatric field in any way.

CIVILIAN PSYCHIATRIC HOSPITAL

Japanese hospitals in general were maintained, in comparison with those in the United States, on a much lower level of sanitation and cleanliness. Plumbing was available in some, while in others, human excreta were handled in wooden buckets. In some places beds were used and in others the patients were on mats on the floor. Bed clothing and patients clothing, were generally not very clean. Psychotic patients, as a rule were kept in locked wards or rooms. Bars, if present at all, were usually outside the glass and, frequently, wards and rooms were separated by glass partitions. There was very little evidence that the patients ever broke the glass, and the Japanese psychiatrists said that they believed their psychotic patients were generally less violent and destructive than ours. Mechanical restraint was not seen at all, and isolation rooms were used apparently very rarely. The more docile behavior of Japanese psychotic patients might be explained by the general cultural background of the people, who are more accustomed to discipline and regimentation and, consequently, accept institutional life more readily. Males and females were housed on separate wards but separate toilets and baths were not always available.

Careful inquiry was made as to the attitude of nurses, and particularly attendants, toward psychotic patients. As far as could be determined, such personnel regard their patients as sick and are as sympathetic and

kindly in their handling of them as is possible under the circumstances. Japanese psychiatrists denied that brutality on the part of attendants was any problem or ever occurred. If this is actually true, it might be explained by the fact that Japanese psychotic patients are generally rather passive in their acceptance of hospitalization and do not react aggressively against it. The attendant's job is therefore much easier.

The treatment of psychoses included the various forms of shock therapy, such as insulin, metrazol and electroshock. Insulin was difficult to obtain because of the war as were electroshock machines for the same reason, so that metrazol and cardiazol were rather widely used. The Japanese all denied any complications of shock therapy, such as fractures, but their pre- and post-shock examinations were very sketchy, and no x-rays were made at all. It is difficult to make a definite estimate as to the results of this treatment. One gained the impression that the Japanese tended to be over-optimistic about the results of shock therapy in general. General paresis was treated chiefly by malaria, although typhoid vaccine was occasionally used. It was admitted that such radical forms of treatment as dengue and tsutsugamushi fever had occasionally been used in the past but that such treatment was on the whole ill-advised.

There was a good deal of talk about occupational therapy and athletics among the patients but very little evidence of this was seen. In visiting most Japanese psychiatric hospitals one was struck by the fact that the patients seemed to be always sitting around doing nothing. However, as the oriental attitude regarding activities and leisure time is very different from ours, this may not have been quite as undesirable there as in our country. The hospitals located outside the city all had farms or vegetable gardens, and most of the work was done by patients, forming a crude sort of occupational therapy.

Group therapy apparently had not been used at all in the civilian hospitals.

The treatment of psychoneuroses was extremely difficult to evaluate. Apparently, there are no formal schools of psychotherapy in Japan. Many of the psychiatrists are familiar with Freud's work, but very little

analysis is carried out except by Professor Marui and his group at Sendai. In general the psychotherapy is pretty much up to the personal whim of the individual psychiatrist. It was determined that psychotherapy consisted of an effort on the part of the psychiatrist to explain the patient's symptoms in a manner which he could understand and to reassure him. Hypnosis was apparently used to a limited extent by a small group of Japanese psychiatrists. Sedatives seemed to be used rather freely. The Japanese apparently were not familiar with narco-synthesis and when this was explained to them, they asked a number of questions and seemed eager to learn the technique. The duration of treatment, number of therapeutic interviews, was again up to the individual psychiatrist. However, it seemed quite definite that the Japanese do not use prolonged therapy, and that they tend to have much shorter contacts with their patients than we do. It was impossible to obtain an accurate evaluation of the results of psychotherapy. Some of the psychiatrists felt that they were able to help a certain number of their patients while others did not seem to benefit by the treatment.

In addition to ward treatment the larger hospitals and university clinics all maintained outpatient psychiatric services. These handled cases referred from other departments, from practicing physicians, and to a limited extent, from schools and courts. The Japanese psychiatrists all understood the principles of mental hygiene, but were frank to admit that they were a long ways behind the United States in this field. However, when one considers the general background of the Japanese people and their religious and political culture, it is remarkable that they have any mental hygiene at all.

MILITARY NEUROPSYCHIATRY

Detailed information on Japanese military neuropsychiatry was extremely difficult to obtain because of the fact that publications in this field were discouraged by the Government. Certain facts, however, were fairly definitely established.

During the early phases of the war, both the Army and Navy apparently had psychological examinations which were applied to

personnel at the time of induction. These are said to have been somewhat similar to our own Army Alpha tests. However, their use was rather generally discontinued except by the Air Corps. No figures are available as to the number of individuals rejected on the basis of these tests, but the Army and Navy medical officers both felt that the numbers rejected were not large in either case.

Neither the Army nor the Navy made any provision for full time neuropsychiatric consultants at any level. They occasionally consulted civilian authorities as to the general aspects of the problem of war neuroses. Also, the Army and Navy medical schools devoted a few hours of instruction to the subject of neuropsychiatry. These courses were generally given by civilians and details were not available. Moreover, only a small percentage of Japanese military surgeons actually attended these courses. The Navy estimated that they had only 6 qualified psychiatrists and these were used in the larger Naval hospitals. The Army estimated that they had approximately 50 psychiatrists, who also were used in the large base hospitals.

There was apparently no provision for front line, division, corps or army psychiatry. Neuropsychiatric conditions generally were unrecognized or were regarded as disciplinary problems during the early stages. Psychoses were eventually recognized as such. Some of the psychoneuroses were also eventually recognized, while others, particularly psychosomatic cases, were regarded as organic and often discharged as medical or surgical.

An attempt was made to find out something about the nature of war neuroses. Apparently the Japanese classify many more conditions under the classification of hysteria than we do. Even allowing for this, it appeared quite definite that the majority of Japanese war neuroses were either some form of conversion hysteria or psychosomatic complaints. Anxiety neuroses appeared to be far less frequent than in our personnel.

Apparently no effort had been made to correlate the incidence of neuroses with the individual's past history and adjustment in

civilian life. However, both Army and Navy authorities were very definite in saying that war neuroses was commonest in individuals who had entered the service by conscription and that such conditions were extremely rare in volunteers and almost nonexistent in officers.

No figures are available as to the total number discharged from the Army or Navy for psychiatric reasons, although some of the Army men estimate the percentage as somewhat less than that of the United States during the first World War.

No effort has been made to follow up discharged war neurosis cases or to study their adjustment after return to civilian life. The Army psychiatrists generally felt that many of these cases probably improved after discharge. The Assistant Surgeon General of the Navy, Adm. Dr. Ykanbayasi, said that he was quite sure that all of these patients got well as soon as they were discharged.

The Japanese Army maintained three hospitals on the home islands for the treatment of neuropsychiatric cases. Two of these were on Southern Honshu and had about 500 beds apiece. The third was the Konodai Army Mental Hospital on the outskirts of Tokyo.

The Konodai Hospital was originally planned as a 1,000 bed neuropsychiatric institution. However, during recent months, 300 of these beds were taken for various surgical cases, such as amputees. The hospital was under the command of Colonel Keisaburo Suwa. This officer spoke no English and had to be interviewed through an interpreter. He seemed to have a good grasp of modern psychiatry and to be familiar with the work of American and European psychiatrists up to about five years ago. He was quite familiar with the neuropsychiatric set-up of our Army during the first World War and was quite frank in saying that the Japanese Army was far behind us in this field. His records appeared to be fairly well kept and the hospital to be generally well organized. It was cleaner than most of the civilian hospitals and there was more help. During the early years of the war, there were 24 medical officers, but at the time of this visit in October 1945, the number had been cut

to 12. There were also approximately 100 male and female attendants.

About 20 percent of the patients at Konodai were war neuroses; 42 percent were "dementia præcox," and 3.5 percent were manic-depressive psychoses. It is interesting that general paresis accounted for only 10 percent of the patient population, which is only half the rate found in civilian hospitals. This is apparently due to improved treatment of venereal diseases among military personnel. The remainder of the cases were brain injuries, epileptics, alcoholics, drug addicts and psychopaths.

Colonel Suwa said that he occasionally sent war neurosis patients back to duty but they were discharged because the Army authorities never followed his recommendations as to type of duty. He also reported that no patients were discharged until they were completely cured; however, he probably meant until they had reached maximum benefit from hospitalization, as he admitted later that some were discharged partly cured. With regard to schizophrenia, he reported 16.3 percent complete cures, 40.7 percent partial cures, 16.6 percent improving satisfactorily, 21.5 percent undergoing treatment, and 4.9 percent deaths.

While the Japanese have a form of Veterans Administration, it is apparently chiefly concerned with pensions and financial assistance and does not maintain any hospitals. The place of veterans hospitals is taken by such institutes as Konodai, where military patients remain until they are able to return to community life, regardless of length of time in hospitals.

REACTION OF THE JAPANESE POPULATION TO THE WAR AND TO THE OCCUPATION

As one would expect, the Japanese people were extremely cooperative as regards the war effort. They blindly obeyed the Emperor and the government and there was no opposition whatever to the conduct of the war. It is worth mentioning, however, that the civilian psychiatrists all reported a reaction by the people to the initial bombing of the home islands. The psychiatrists themselves offered the information that since the

people had not been warned that they might be bombed, they reacted rather badly to the initial bombings, developing hysterias and other neurotic conditions. There is no information as to the total incidence of such reactions, and apparently they tended to level off as time went on.

It is doubtful whether the general population ever knew enough about the atomic bomb to react very definitely toward it. Also, the war ended very quickly after the atomic bombing, and many of the people did not hear of it until after the war was over. In both Hiroshima and Nagasaki, the people appeared extremely sullen and resentful when our occupation troops came in. This cannot be considered unusual, in view of the tremendous destruction and loss of life in those two cities. Unfortunately, the Army medical committee studying atomic bomb casualties did not have a psychiatrist. The medical men and surgeons on this committee have reported that they did not notice any particular psychiatric reaction among the atomic bomb victims of ordinary bombing. Fortunately, the Army and Navy Committee which has recently begun to study the effects of bombing on the general population includes a qualified psychiatrist, Commander Alexander Leyton.

The reaction of the general population to the occupation is interesting and worth describing. When our troops first entered Yokohama, the people generally kept out of the way and seemed to expect rather bad treatment at the hands of our troops. As time went on and no raping and pillaging occurred, they gradually began to appear on the streets. Fraternization was at first forbidden by the Japanese Government, but gradually took place in any case. The children in particular made friends with the G.I.'s and the girls gradually followed. The Emperor recently came out in favor of fraternization which is now rather widespread. The common people seemed to be very happy about the occupation due apparently to two definite causes. In the first place, the people were greatly relieved when the strain of war had ended and they no longer had to fear death and destruction by bombing. Then,

too, the good treatment which they received by our troops was so unexpected that it became a general cause for rejoicing. People in general seemed to be enjoying their new found freedom. The women were getting ready to vote. The population were holding mass meetings, striking, and generally behaving in a rather democratic fashion. While some of this behavior was obviously insincere, there did seem to be a certain number of Japanese people who actually wanted a democratic form of government.

CONCLUSIONS

Evidence has been presented that the Japanese, despite marked differences in background and culture, are psychobiologically similar to the people of the western nations. They react, with minor differences, to environmental situations and psychogenic stimuli very much as we do. The sociological and political importance of this observation is obvious in the formulation of plans for the future of Japan.

AN IMPROVED INSTRUMENT FOR THE DETERMINATION OF CHANGES IN THE PAIN THRESHOLD CAUSED BY DRUGS¹

FREDERICK B. FLINN, PH.D., AND A. S. CHAIKELIS, PH.D.

Considerable interest has been aroused in the last few years regarding the algesimetric procedure for measuring pain threshold and the lasting effect of an analgesic drug on the pain threshold.

The studies reported can be divided into two groups: (1) those which were merely interested in determining whether or not different physiologic-pathologic conditions existing in the body lowered or raised the normal pain threshold of an individual; (2) those which were concerned with the effect of an analgesic drug on the pain threshold and the length of time that analgesia lasted.

Pain threshold may be defined as the amount of stimulus which will just barely produce a painful sensation under given conditions. The stimulus used may be of a chemical, mechanical or electrical nature. One has to be careful that the method used does not damage the tissue subjected to the stimulation. This is important when one is determining the effect of a drug on raising the pain threshold, that is, the height of the increase and the length of time that the effect of the analgesia exists. Furthermore, one must take into consideration whether or not the subject being tested has a cold, is fatigued, or constipated. Tests cannot be made when the invisible perspiration present on the skin of the subject is increased by either the temperature of the body or environmental conditions. The ideal conditions in which to determine the pain threshold is in an air conditioned room where the temperature can be kept around 20° C. and 25 percent humidity. Sweating causes a decrease in the effectiveness when the stimulus is heat.

We have experimented with the various methods of algesimetric measurements that have been described in the recent literature and have come to the conclusion that the method described by Hardy, Wolff and Goodell(1) is the most reliable. However, in using the Wolff technique we came across what seemed to us to be various flaws and chances for error.

We shall describe an improved instrument which we feel is as nearly automatic and impersonal as can be devised at the present time. Unfortunately we have to depend on the individual for the subjective sensation of pain. For an accurate study of a drug it is necessary to familiarize the subject with the pain sensation for a short period of time. For this reason we do not feel that one can take a person off the street and make accurate observations for the comparison of one drug with another.

The apparatus (based on the idea suggested by Dr. Wolff and his associates) consists of a 1000-watt projection lamp bulb housed in a cylindrical metallic chamber containing a highly polished parabolic reflector. The light from the bulb passes through a circular aperture which is in direct line with the special concentrated filament of the lamp. The beam of light passes through a two-lens-component condenser so adjusted as to bring the beam to a focus calculated to be $\frac{1}{2}$ cm. from the surface of the exposed skin area (the focal point being inside the skin). The skin area exposed is restricted to an area of $\frac{3}{4}$ inch diameter (3.5 cm.²) circle by a fixed screen aperture. The subject places his forehead firmly against this aperture when undergoing a test.

The intensity of illumination produced by the 1000-watt lamp is automatically increased from a determined minimum by an arrangement of gears operated by motors (r.p.m. adjustable) controlling a power-

¹ From the Division of Industrial Hygiene, Columbia University, School of Public Health, New York City, N. Y.

Grateful acknowledgment is made to the Whitehall Pharmacal Co. who supplied funds that made it possible to carry on this work.

stat (a variable resistor for a.c.). The duration of exposure of this light is again automatically timed by an electrically operated interval timer controlling an electromagnetic shutter. The aforesaid duration of exposure is fixed at 3 seconds.

Variations in the line voltage are eliminated by means of a Sola constant voltage transformer with a primary voltage ranger of 95-125 volts with a rated V.A. of 1000 so that the secondary delivers 115 volts at 8.7 amps.

The intensity of illumination is measured with a specially designed vacuum thermocouple of 10 ohms resistance. This intensity is then recorded in millivolts with a sensitive millivoltmeter. The measuring vacuum thermocouple is fixed in position in a wooden block so that when it records the intensity of illumination it is always in the exact same position as the subject's forehead. The light intensity develops to a maximum well within 3 seconds and thereafter remains constant no matter how long the light is kept on. What is actually being measured is the heat of the light that passes through the vacuum tube. The thermocouple being in a vacuum is not affected by an external source of warmth.

We feel that our instrument has one advantage and that is the ability to regulate it in such a way that preliminary readings can be made and these readings can be checked from day to day. This check method insures us that the condition of the apparatus is always the same.

The advantage of this is seen in the following experiment on the same subject taking aspirin on different days. With the powerstat so set that the millivoltmeter gave a reading of 12 millivolts, the reading on three different days was as follows:

3/28/46—	Initial pain threshold was.....	12.2 m.v.
4/ 1/46—	" " " "	12.6 m.v.
4/ 2/46—	" " " "	12.6 m.v.

The rise in the pain threshold was respectively 21%, 23%, 23%.

When care is taken to have all conditions both in the subject and the environment constant, the threshold from day to day does not vary greatly. What seems interesting is that there is but little difference in the amount of heat necessary to produce the initial pain threshold in a given group of subjects although their reaction to the drug may vary.

For those who wish to calculate the calories from the readings on the millivolt scale of 20 the following formulæ are available. From this temperature the calories per square centimeter can be calculated for comparison with the Wolff, Hardy method.

Thermocouple temperature in degrees centigrade equals:

$$\frac{\text{Millivolt reading} \times 1100}{60} +$$

room temperature in degrees centigrade.

The intensity of the incident radiation as produced by lamp heat source:

$$I = cT^4$$

$$I = 1.36 \times 10^{-12} (T^4)$$

where

"I" is in cal./sec./cm.²

"T" is in absolute temperature

"c" is equal to 1.36×10^{-12}

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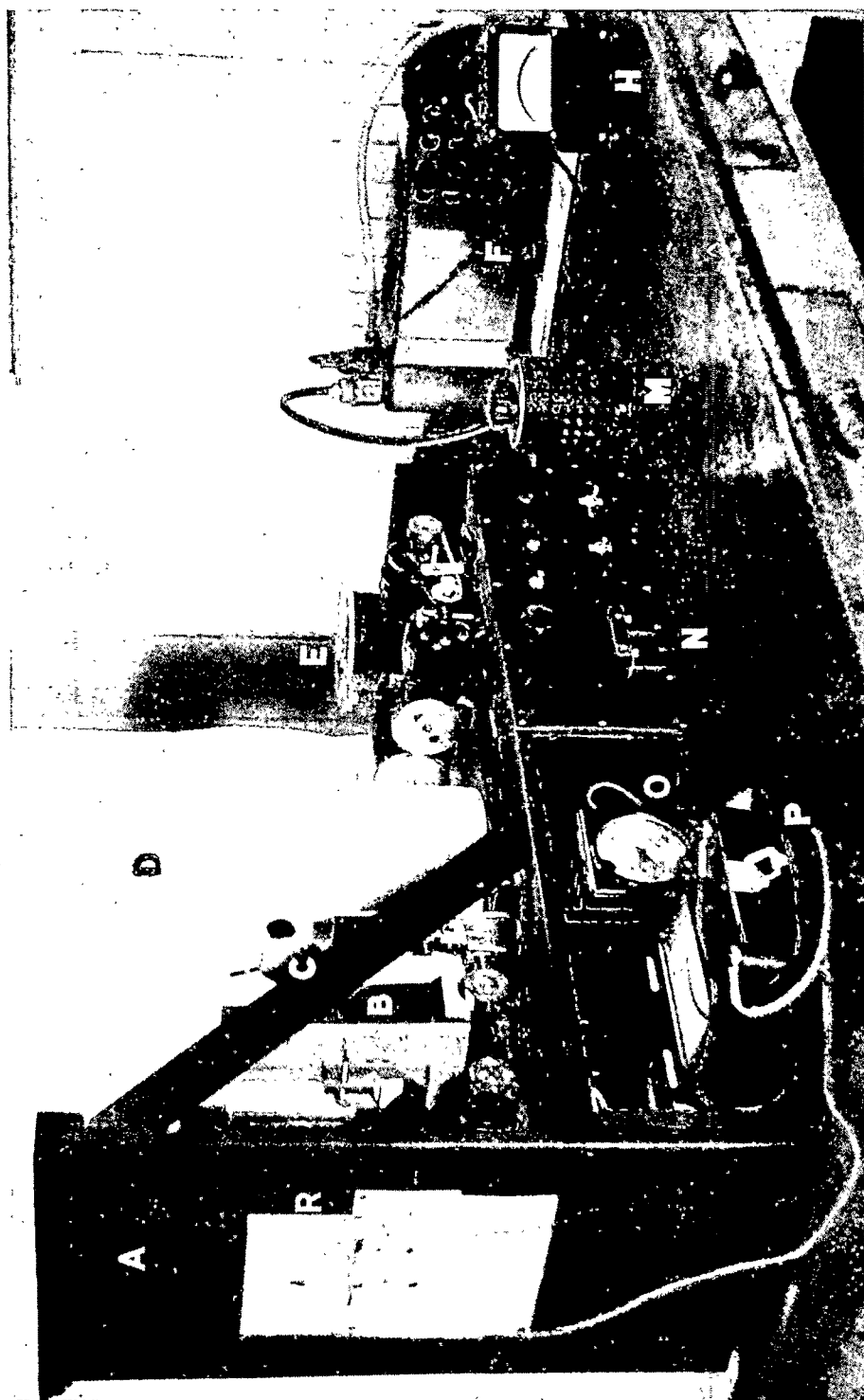


FIG. 1.

- A—Head board of apparatus.
 B—Condenser system.
 C—Electromagnetic shutter.
 D—Cylinder, housing the 1000-watt lamp.
 E—Electrically driven powerstat for light intensity control.
 F—Sola constant voltage regulator.
 H—"Spot-check" voltmeter.
 M—Powerstat for speed control of (E) motors.
 N—Contact switch for operation of instrument.
 O—Electric interval timer.
 P—Millivoltmeter for thermocouple.
 R—Vacuum-enclosed thermocouple in wooden block.

ART IN THE HISTORY OF MEDICINE

THE SIXTEENTH CENTURY CURES FOR LUNACY

CLEMENTS C. FRY, M. D., NEW HAVEN, CONN.

The artists of the 16th and 17th centuries have depicted in figurative narratives the activities of the traveling quacks, especially those of the low countries.

The stone cutting specialist who pretended to remove the stone or stones from the body, and in case of insanity from the head, was the common theme of numerous artists, such as Jerome Bosch, Jan Steen, Franz Hals, Jr.

The etching "The Witch of Mallegem" by Pieter Breughel the elder (c. 1525-1569) allegorically presents the subject. The quack is seen cutting a stone from the victim's head, while other afflicted with stones await their turn. An assistant, with a lock on his lips, under the table passes stones to his employer or shows them to the crowd.

Although the seat of lunacy was said to be in the head, stone cutting did not necessarily cure the patient, and numerous other approaches to the patient's pocketbook were indulged in by the quack. The impressive and elaborate chemical laboratories were ideal set-ups for exploitation by the charlatan.

In the picture "Doctor Wurmbrandt, der im gantzen Land, überall bekandt" we see the forerunner of the therapeutic application of heat for the cure of insanity, as the cutting for the stone may be looked upon as the forerunner of lobotomy. This patient's head is stuck in an oven and through distillation the causes of the illness are allegorically represented by snakes, worms, insects and other objects. A medicine (wisdom) is given him by mouth and fools come from his bowels. The artist is Matthias Greuter (c. 1564?-1638).

The verses beneath the drawing are freely translated. Thus does Dr. Wurmbrandt address his patient:

"You sick men and women: If you wish to entrust yourselves to a doctor, then entrust yourselves to me. I am the best healer of the human race. Just show me your urine

and I shall soon see what has happened to your body and brains to make you acc so foolishly and to associate with fools. I am a master of these things; can make the giddy and mad intelligent; can recognize immediately from the face what disjoins a person mentally and can conjecture easily from one's manners what else might be wrong. If you have no rest because of worms, then hurry to me, Dr. Wurmbrandt: I shall cut away skillfully the worm from your worm-eaten brains. If you struggle and pick a quarrel with a mouse (in your imagination?), which no one can very well endure, then for a little money I will catch them for you; I have cats up my sleeve which are so full of cunning that no rat is safe. If you have too many rafters in your head (*i. e.*, If you are crazy) then you are a very great fool; if there is a spar missing in your head then you are very close to being an arrant fool and children might laugh at you. If you lose your senses, then fantastic notions, doves and other nonsense continually fly in and out of your head. Your mind then becomes its own house. See! I can name all that as vertigo and wild imaginings as when one is inflamed by wine or just as a coal fire burns, and as when you, having become quite drunk, do not know the east south, west or north. Yes. When you are conscious of nothing—whether you are man or woman—then trust me to bring you back to your right mind. If you do not get the mastery of just one of your evil troubles (so that my medicine must depart without any healing power and without proper working); if you do not wish to understand and do not wish to recognize who you are and what foolishness is in you; and if you display yourself pompously and believe that more wit is in your nose than in twelve wise minds—Oh woe!—then all medicine is useless. If my medicine is to refresh you then you must have faith in it. Faith establishes all things. Without it all craft and relief is

trifling. But come! We will test it in my alchemical laboratory. There I have set up my *Brennhelm* (a dome used for distilling). Come. Present your head and do not be afraid. We will in a short while see the mist go up in full current with the thousand-fold contents of a fool's mind—contents which I noticed so well in you. Oho! They already come up. What distilling! What things fly out! What trash was stuck in your head! You confused simpleton! You have me producing more rubbish from your head than there is in almost a whole forest of monkeys. If I make you free of this illness then proclaim that I am a master."

The caricature "By Veele zit de kei In't Hooft om dat Men in de Wind Ge-looft" is a copy of Carolin Allardts drawing "Comt Mannen en Vroviwen Alle Beyen laet and synden vande key" which is the outstanding work. Many methods by which the stones are removed from the body are depicted. Among them are, cutting from the head, flagellation, removal by pincers from the anus, purging or the natural re-

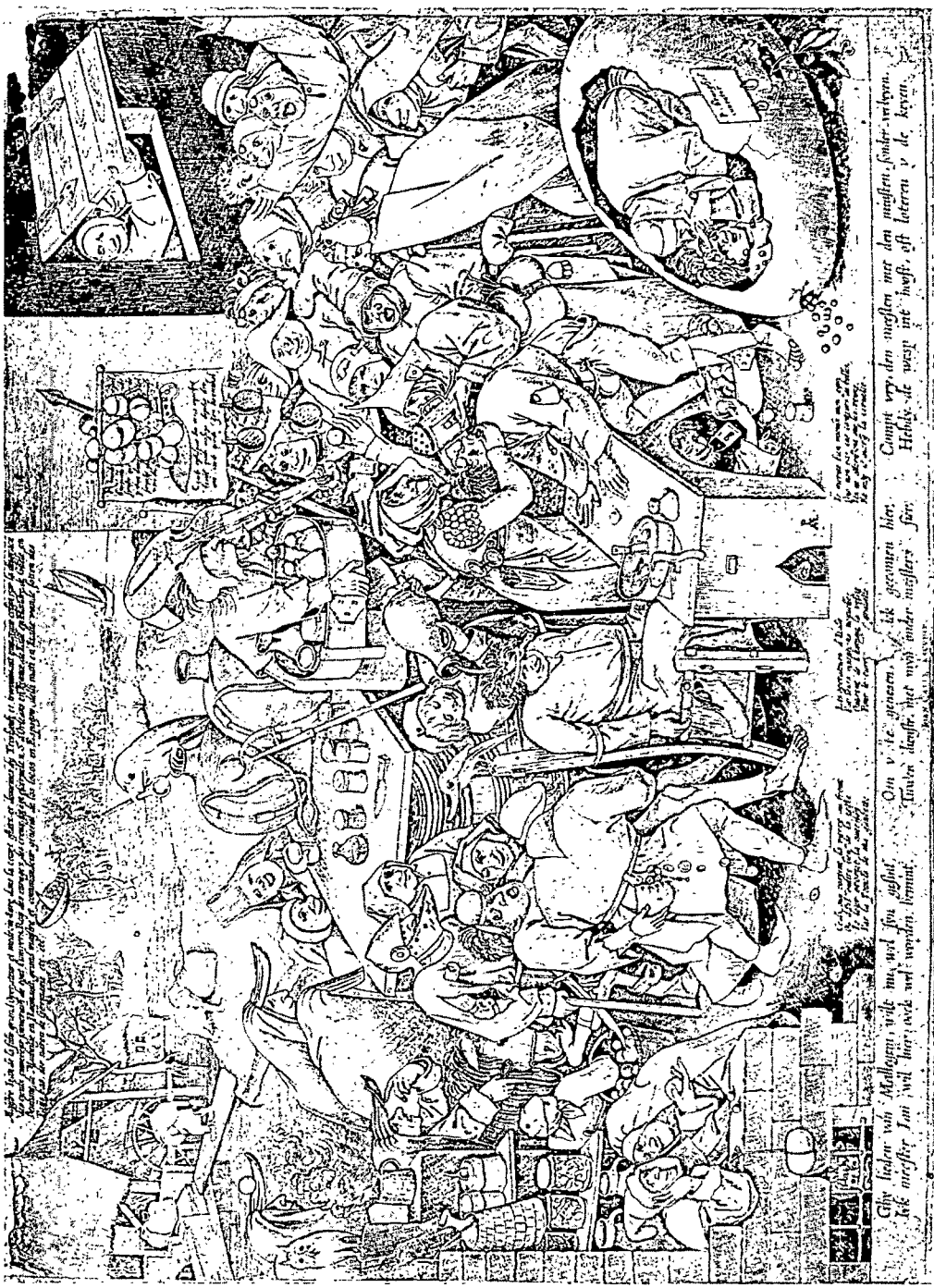
moval through bowel movement, vomiting, removal through the urinary system, and the treatment through the use of tobacco and the use of the hot iron. The legends are allegorically expressed in each group.

A stipulation in the Oath of Hippocrates may properly be quoted in connection with these caricatures:

I will not use the knife, not even, verily, on sufferers from stone, but I will give place to such as are craftsmen therein.

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The Witch of Mallegem.



Dr. Wurmbrandt, der im Gantzen Land, überall bekandt.



By Veele zit de kei In't Hooft om dat Men in de Wind Gelooft.

A COMPARISON BETWEEN THE NEUROPSYCHIATRIC SCREENING ADJUNCT (NSA) AND THE CORNELL SELECTEE INDEX (FORM N)¹

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WITH THE TECHNICAL ASSISTANCE OF TECH. SGT. HERBERT GRAHAM

The heavy economic and hospitalization burden which the government has borne since World War I as a result of neuropsychiatric casualties, has given marked impetus to many investigations, civilian and military, toward the development of methods whereby potential psychiatric casualties could be eliminated before military indoctrination.

Inasmuch as the induction stations proved the most practical places to screen out the more obvious psychopathological syndromes, increased attention was focused on development of tests applicable to examinations of large groups of men with very limited time available for individual examinations.

In order for any neuropsychiatric screening test to be of value in an induction station it is necessary that the test be rapidly administered, easily comprehended, quickly scored, and that the individual items in the test be easily scanned by the neuropsychiatrist. The test substance should indicate the presence of the commonest syndromes such as chronic anxiety states, neurasthenia, hypochondriasis, antisocial trends, and the more common psychosomatic illnesses as asthma, migraine, peptic ulcer, and vasomotor syndromes.

PURPOSE IN COMPARING TESTS

Pressure from circumstances arising in large scale neuropsychiatric examinations serves as a constant stimulus to examiners to evolve methods and to compare various tests which, besides serving best in saving energy and time, would be fairly reliable indices to psychopathology.

For a while we used short "home-made" questionnaires, consisting mostly of questions which denoted psychosomatic manifestations. These symptoms were given the utmost consideration because the two examining psychiatrists learned from intensive clinical ex-

perience in military neuropsychiatric hospital wards that the greatest number of patients presented symptoms and complaints predominantly psychosomatic in nature.

We quickly utilized the Cornell Selectee Index,² Form N, as a neuropsychiatric screening instrument following publication. It proved more valuable than anything we had used previously.

About ten months later the War Department issued a test known as the Neuropsychiatric Screening Adjunct (NSA). This aid also proved very helpful.

The tests were employed together for about one month. It was found that each possessed certain advantages, as well as disadvantages. One of the purposes of this paper is to discuss those factors which tend to make one test better than the other.

DESCRIPTION OF TESTS

Cornell Selectee Index, Form N.—As a result of numerous test procedure experiments on a variety of groups of subjects an index was devised based on the results of three tests which indicated reaction patterns such as neuroses and other manifestations suggestive of unstable personalities, including the subject's self-confidence, range of interests, decisiveness, and psychosexual aberrations.

Subsequent studies permitted the investigators to recommend a simplified and abbreviated application of the test.³ It was found that the third form, Form N, of the Cornell Selectee Index, which we used exclusively in our examinations, would suffice for routine examinations. Forms one and two were to

¹ From the Neuropsychiatric Section, Armed Forces Induction Station, Seattle, Wash.

² Weider, A., Mittleman, B., Wechsler, D., and Wolff, H. G. The Cornell selectee index. *J.A.M.A.*, 124, 224-228 (Jan. 22) 1944.

³ Weider, et al.: The Cornell selectee index: Short form to be used at induction, at reception, and during hospitalization, pp. 6, privately printed.

be reserved for cases requiring more intensive study of personality structure.

Form N consists of 64 questions designed to denote certain psychopathology which was mentioned in the opening paragraphs of this paper. A certain number of the items consists of questions which were more important than the others. These are known as 'stop' or 'critical' questions because anyone exhibiting such symptoms should be 'stopped' for especial neuropsychiatric appraisal. An example of a 'stop' question would be: "Have you ever gotten into serious trouble or lost your job because of drinking?"

The directions to the group consist of short stereotyped instructions. They are to answer every question as quickly as possible, by encircling the appropriate 'yes' or 'no.'

Five minutes was the time needed to complete the test, as found by the investigators, and could be scored in less than one minute with the use of a key by anyone with a secondary school education or its equivalent.

The authors stated that Form N would detect approximately 85 percent of persons suffering from neuropsychiatric and psychosomatic disturbances when applied to literate individuals.

Neuropsychiatric Screening Adjunct (NSA).—By a War Department order there was effected in the fall of 1944 a routing application of the NSA for the purpose of rapidly 'screening' selective service registrants having indications of neuropsychiatric and psychosomatic tendencies. This test was also to be administered to illiterates. These individuals are examined verbally by a clerk, who, after checking appropriate responses, scores the test in the usual way.

The form consists of 23 questions. Most of these offer a choice of one of three answers. Several 'stop' or 'critical' items are also included, which have a similar significance as in Form N.

Statistical study conducted at our induction stations revealed that the NSA 'screened' approximately 85 percent of individuals presenting the more common psychopathological syndromes.

CORRELATION

A correlation investigation was undertaken to determine statistically whether the NSA

and the Form N were instruments performing the same function.

An unselected group of 768 inductees were administered both tests. The two neuropsychiatrists interviewed the men in a customary procedure with the exception that the 'screening' forms were not seen. The diagnostic impression was entered as usual. However, preceding the impression was placed a letter ranging from A to D. These letters designated the examiner's evaluation of the relative stability of the individual's personality. A group scale of this type was used for statistical reasons.

The group ratings were interpreted as follows: Group A consisted of selectees whom the examiners considered as "normal" with practically no psychopathology elicited during the interview. Group B consisted of selectees whom the examiners considered as

TABLE I
FREQUENCY DISTRIBUTION

Psychiatric rating	Examiners	NSA		Form N	
		Mean score	Standard deviation	M.Sc.	S.D.
A	379	25.42	3.3	5.5	4.6
B	141	21.8	4.24	9.6	6.15
C	63	20.45	5.3	12.1	8.85
D	185	17.54	5.8	17.26	9.75

"normal," but who presented a borderline degree of psychopathology which was not considered sufficiently pronounced for disqualification. Group C consisted of selectees who were neuropsychiatrically disqualified, but who presented a borderline degree of stability which was not considered sufficiently pronounced for qualification. Group D consisted of selectees who were considered to be psychopathological without doubt.

Owing to the fact that there were too few points on one axis of the correlation chart to permit satisfactory correlation of either test with the neuropsychiatric rating, a frequency distribution of the scores was made. The mean score and the standard deviation were established permitting determination of the difference between means (Table I).

The M test revealed that the difference between Groups A and B was significant, as was the difference between Groups C and D. However, the difference between Groups B and C was borderline, which

would not permit a categorical statement as to whether or not the apparent difference would hold true if the entire population were tested. The absence of significance between Groups B and C was probably due to an insufficient number of cases entered in these categories.

A correlation set up between the NSA and Form N revealed a value of minus .81.⁴

COMMENT

On the basis of experience gained from having neuropsychiatrically examined for military service approximately 70,000 individuals, including selective service registrants, WAC applicants, and Air Corps volunteers, I believe that investigators should place more emphasis on the development of individual test items.

Phrasing of questions and simplicity in terms determine to a marked extent the usefulness of a neuropsychiatric test used in an induction station. It is relatively easy to determine which symptoms would denote psychopathology, but long experience in actual examining is necessary to learn the most advantageous way to phrase questions, and to learn which words in individual questions are beyond the vocabulary of significant numbers of examinees. For example, a question in Form N reads: "were you ever a patient at a mental hospital?" Hardly a day passed that this question was not answered in the affirmative in more than one instance. Invariably, the selectee misinterpreted 'mental' to mean 'medical.' A similar question was presented in the NSA but in the following form: "Were you ever a patient in a mental hospital (because of your nerves)?" The superiority of this phrasing was shown by the fact that since the NSA has been used in our induction station I have not seen a single affirmative reply.

In general, the wording of questions in the NSA was more simple and explicit than in Form N. There were found only three

questions in the latter which were considered superior in presentation. The exceptions were: (a) (Form N) "Have you fainted more than twice in your life?"; (NSA) "Have you ever had any fainting spells?" As a rule, individuals who fainted would not refer to the acts as 'spells'. They tend to associate the term 'spells' with unprovoked abnormal behavior of one sort or another. In most instances the examinees felt that they could explain why they fainted, giving reasons such as "overheated" room, cut finger, witnessing accident, and so forth. (b) (Form N) "Are you considered a nervous person?"; (NSA) "Are you ever bothered by nervousness?". Many instances have been encountered where the man does not think he is nervous but will admit that his wife, parents or friends do think so. (c) (Form N) "Have you ever had a fit or convulsion?"; (NSA) "Have you ever had fits or convulsions since you were ten years old?". Obviously, a fit or convulsion at the age of nine, eight, or any time from early infancy, would be as significant as at any other pre-adolescent age period.

Important defects were found in both tests for similar items. An item as "Do you take dope?" (NSA) or "Do you use dope?" (Form N) would be better for obvious reasons if it were to read "Have you ever used dope?" Another example whereby a slight change in phrasing was found to elicit many more accurate replies is as follows: "Have you ever gotten into serious trouble or lost your job because of drinking?" (identical wording in both tests), modified by the examiner to, "Have you ever gotten into trouble (note: omit the word 'serious') or lost your job or been arrested because of drinking?"

The Cornell Index (Form N) contains several questions not present in the NSA which are of considerable importance for a military neuropsychiatric evaluation. These questions pertain to bed-wetting between the ages of 8 to 14 years, presence of unusual fears, sleep-walking, and to whether the subject has been arrested more than three times. Incidentally, this question would serve more advantageously if it inquired whether he had *ever* been arrested.

Although Form N was found to screen

⁴ A minus value was obtained owing to the difference in scoring methods applied to the NSA and Form N tests. The former was designed in such a manner that the degree of psychopathology would be manifested in direct proportion to diminishing score values. The latter test is scored in an opposite manner.

from 80 to 90 percent of individuals believed to be militarily unfit, as mentioned previously, and it was determined in our induction station that the NSA screened to the approximate extent of 85 percent, no man should be considered acceptable for induction merely on the basis of his score value. A number of psychopathological syndromes are not effectively detected by the tests. The category of psychopathic personality is inadequately screened owing to the very limited number of items designed for this purpose in the tests. The five questions in Form N and the two or three in the NSA which suggest alcoholic trends and arrests are insufficient to detect the large group of sub-types of psychopathic personalities. Anxiety hysteria will be satisfactorily manifested, but conversion hysteria will not. Obsessional states, pre-psychotic and psychotic personalities cannot be expected to reveal sufficient and reliable symptoms in the forms.

One of the prime necessities for a personal interview is to rule out malingering. "Positive" malingering in the tests, whereby the subject attempts to convey an impression of incapacitation, is rare, but "negative" malingering, whereby the opposite attempt is made, is very common. In the latter case the score value may be well within the "acceptable" range, but his general appearance often belies the stability of personality which the score suggests. As a rule it requires very little pressure on the selectee during the interview to elicit the symptoms which experience has taught the examiner to expect in such individuals.

In addition, a personal neuropsychiatric examination must be made in all cases in order to rule out the presence of organic neurological disease.

From the point of view of practicability, the neuropsychiatrist is less interested in test score values than he is in the way certain questions are answered. Regardless of score achieved, the individual items must be perused. The frequency with which a solitary significant question would be answered in the affirmative (not necessarily a 'stop' question) and be accompanied by a final score falling well within "passing" limits soon taught us the need for a more careful examination of the answered questions. For example, in

Form N, a man may answer in the affirmative to the question pertaining to bed-wetting between the ages of eight to fourteen. This may have been his only noteworthy response in the test. A history of enuresis during that particular age period is not in itself disqualifying, but if we notice during the interview that he had also indulged in severe habitual nail-biting, the evidence becomes greater that here we have a man with an unstable personality. Probing further we usually find additional evidence, not uncovered by the tests, such as, perhaps, psychosexual maladjustment, marked asocial trends, and so forth. The ramifications may become numerous.

The time factor precludes detailed interrogation regarding each question answered in the affirmative. We can only pick out items which we consider most important. A test that is confined wholly to important questions such as the NSA is of more value to the induction station examiner than a test such as Form N which consists of approximately three times as many questions, about two-thirds of them of little use in the neuropsychiatric evaluation.

An additional advantage present in the NSA is the multiplicity of choice in replies to questions. It has been found during our examinations that, as a rule, when a man underlines 'seldom' in reply to a question, detailed questioning fails to result in significant evidence, and therefore we now tend to disregard a question answered in that manner. However, in Form N, where questions are answered by encircling a simple 'yes' or 'no' the examiner spends much time on certain questions answered by 'yes' only to learn that the man really meant 'seldom.'

Furthermore, the administration section of an induction station is vitally concerned with time allotted to the various tests and questionnaires to be completed by selectees. The NSA form is very satisfactory from that point of view. It required six minutes, as an average, to answer the 23 questions, and twenty seconds for scoring each test, no apparatus being required for this purpose.

Although the authors of Form N found that it requires approximately five minutes for completion of their test, as mentioned previously, and could be scored in less than

one minute with the aid of a key, our studies resulted in the conclusion that completion of Form N required fifteen minutes.

CONCLUSION AND SUMMARY

1. A statistical correlation study made in an induction station between the Neuropsychiatric Screening Adjunct (NSA) and the Cornell Selectee Index, Form N, revealed that both tests performed the same function as shown by a correlation of minus .81.

2. Intensive neuropsychiatric examining experience in an induction station has taught the need for greater attention to be given to the manner in which individual test items are answered, and a minimum amount of consideration given to the test score value.

3. We believe the NSA test superior to Form N in the following ways: (a) Less time is required for administration and scoring; (b) phrasing of individual questions is better in that wording is more simple and to the point; (c) a minimum of non-essential questions are presented. This quality permits a perusal of the items by the examiner with a minimum of time and visual sorting of

the significant responses; (d) the multiplicity of choice in type of reply allowed the individual was of definite aid in the economy of the neuropsychiatrist's time.

4. Certain advantageous elements were present in Form N which were lacking in the NSA; namely, Form N contained certain very important questions absent in the other test, and several items were better worded and presented than similar items in the NSA.

5. Neither the NSA nor Form N was designed to effectively detect psychopathology such as psychopathic personalities, conversion hysteria trends, obsessional states, and the pre-psychotic and psychotic personalities.

6. Any type of neuropsychiatric screening test must only serve as a supplement to an examiner's judgment. The utilization of a test score by a clerk as the only criterion to determine whether an individual is neuropsychiatrically acceptable, without a routine neuropsychiatric interview, is not recommended. Of necessity, a neuropsychiatric interview must include a neurological examination.

PERSONALITY STUDIES IN MENOPAUSAL WOMEN¹

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INTRODUCTION

The present study was concerned with the following questions: (1) Is there any characteristic type of psychological reaction associated with the menopause proper? (2) If so, in what way does it differ from other disturbances occurring during the involutional period? (3) What is the relationship between the physical symptoms and signs of the menopause and its emotional concomitants? (4) Are there any specific factors in the patient's personality and in her history which predispose her towards such emotional reactions?

REVIEW OF LITERATURE

The literature on psychological concomitants of the menopause can be traced back at least one century. There are observations by gynecologists as well as by psychiatrists. Many of these are random remarks scattered in textbooks, or in papers dealing with different topics. However, there are papers by gynecologists, particularly those dealing with the artificial menopause, in which special chapters are devoted to psychological symptoms and complications. There are also studies by psychiatrists, particularly devoted to the climacteric period. These papers present a medley of the most varied observations, from personality changes intimately associated with the loss of the reproductive function to acute manic psychoses obviously precipitated by the menopause. Little attempt is made to go into the dynamics of these phenomena.

The earliest reference in the medical literature to a menopausal disorder is the report by Willis (1684) of a woman of 50 who, six months after the menopause, developed "convulsions of the stomach."

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Brière de Boismont (1842) remarked that the menopause is frequently followed by melancholia. Hegar (1878) stated that during and after the menopause diseases of the nervous system come next in frequency to those of the sexual organs. As the symptoms most frequently encountered he describes hyperaesthesia, prickling and burning sensation in the skin of the extremities, "pseudo-narcotism," uncertain gait, muscular weakness, insomnia, migraine and hallucinations. All this is encountered in spontaneous as well as artificial menopause. Börner (1886) in one of the earliest monographs on the subject found that personality changes are frequently the first sign of the menopause and indicate its approach. He, too, stresses the frequency of depressive reactions but cites examples in which depressive women during this time developed a gay temperament. In other cases he saw irritability and quick temper as a menopausal symptom. Skene (1880) found that, at least in the poorer classes, "climacteric insanity" is frequently associated with malnutrition. Soon after ovariectomy had been more generally introduced interest became focussed on the changes following the artificial menopause. According to Tissier (1885) women never lapsed as deeply into melancholia following castration as men. Glaevecque (1889) made a very careful study of 38 women after castration. In one-third of the cases he found no emotional changes at all, in one-third depression was marked, and the remaining third showed either "increased happiness" or fluctuating states, or morbid irritability and excitability. Two of his depressed cases had to be hospitalized; one of them presented, according to the author's description, a picture of agitated depression. He, like Hegar, comes to the conclusion that "castration produces an artificial climacterium which resembles the spontaneous one in every feature," the only difference being that "by castration women enter the climacterium prematurely." It is noteworthy that even at that time Werth

(1888) observed that "melancholic" reactions in women occur as a sequela to any operation on the reproductive organs and even to laparotomies in general.

Many of the early authors paid particular attention to the question of change of libido during the artificial as well as during the natural menopause. The general trend there is to emphasize the persistence of libido after the natural menopause (Kisch, 1874) and the impact which castration has on the libidinal function. However, these latter observations are usually modified. Thus, for instance, it is emphasized that the patients after castration still remain prototypes of womanly features, and that, although sexual libido diminishes, love for husband and family is unaltered (Peaslee, 1873).

The earliest detailed study of climacteric psychoses in women is contained in a remarkable paper by Merson (1876). He found that in a considerable percentage of a group of new admissions to a mental hospital there existed a time relationship with the menopause. In 69 of these the psychosis had manifested itself before, and in 147 cases after complete cessation of menstruation. Merson did not consider the menopause as an exclusive "cause" of these breakdowns. As additional motivating causes he mentions "bereavement," "cruelty of husband," "financial trouble," and such precipitating somatic factors as profuse uterine hæmorrhage. Among the cases in which he was able to exclude organic brain disease with certainty he observed several distinct groups; there was a simple form of depression with nervous irritability and oversensitiveness, secondly a form of depression with "emotional and intellectual disturbance," also hallucinations and delusions with depressive content, and finally one form characterized by delusions of suspicion and persecution, hallucinations and outbursts of excitement.

From these examples it can readily be seen that, perhaps with the exception of Merson's paper just quoted, we have to deal with general observations and statistical cross sections. It was only in this century that distinct types of reactions emerged out of this polymorphous array. The only well-defined type is that of involutional melancholia. It is beyond the scope of this paper

to describe the gradual evolution of this clinical concept from the earliest attempts (Lipschitz, 1906; Dreyfuss, 1907) to a clear delineation of the picture (Palmer and Sherman, 1938; Malamud, Sands and Malamud, 1941). One fact, however, became increasingly apparent; involutional melancholia is not directly associated with the gonadal changes of the climacterium. This is suggested by the fact that the disturbance occurs at any time of the involutional period, sometimes separated from the climacterium proper by two decades. Moreover, estrogen studies showed that in women the occurrence of involutional melancholia was not correlated with the extinction of the ovarian function (Carlson, 1937). The reports on the effect of estrogenic therapy in these involutional psychoses were extremely contradictory (Werner *et al.*, 1936; Schube *et al.*, 1937; Little and Cameron, 1937; Pollack, 1939).

Since it is established that the "involutional" syndrome is not immediately associated with the climacterium, we have to ask ourselves what, then, is "climacteric" in the strict sense? Are there personality changes, emotional disturbances and problems immediately connected with the gonadal crisis, and in what way do they differ from what is commonly designated as "involutional"? This question is not only of academic interest; there are cases of profound, seemingly endogenous depressions during the involutional period, which, to our surprise, turn out to be refractory to electric shock treatment, and others which, against all our expectations, react well to estrogenic therapy and to simple guidance. Therefore, it appeared necessary to study the possible dynamic factors on a systematic comparative basis.

There are in the more recent literature interesting observations on menopausal disturbances. Many of these observations are presented as general remarks; they are based on the physician's general experiences and are usually not supported by case material, or by comparative analysis, or by the results of uniform methods. Stelzner (1926), in a reply to statements made by the famous gynæcologist Sellheim, drew attention to the sources of error underlying

all such statements. According to her, the gynecologist sees only a selection of cases; namely, either the overworked housewife, sexually "exploited," fatigued by housework, by undesired children and by abortions, and overprotected, mimosa-like women of the upper classes. This is the origin of the tale of the "change of life." Curiosity, suggestion, particularly the influence of descriptions supplied by other women, play their part. Farrar and Franks (1931), on the basis of an actual analysis of case material, came to similar conclusions. These authors in a careful survey found that about one-third of the depressions associated with that life period are reactive depressions; about one-third are cases of involutional melancholia in the strict sense; and about one-third belong to the general group of endogenous affective disorders. Hoskins (1944) regards over-responsiveness of the sympathetic nervous system as the central feature of the menopausal syndrome. This theory is based on the early experimental findings of Hoskins and Wheelon (1914). Hoskins observes that the chief clinical feature is anxiety, and that during the menopause there appear various threats to the ego which are the source of anxiety. These threats are: involution of the reproductive organs which present a token of power (castration anxiety); increased fatigability, loss of friends; economic insecurity.

Shorr (1941), in discussing the physical and emotional disturbances of menopausal women, comes to the conclusion that the emotional complications are of a psychoneurotic nature and are almost always exacerbations of similar previous disorders in the patient's life.

The most recent treatise on the subject is that by Helene Deutsch (1945). According to her, there is frequently during the preclimacterium a return of creative drives. Some women desire to become pregnant once more; there is an apprehensive feeling about the "closing of the gates." The author makes an interesting parallel between puberty and preclimacterium, both characterized by the expectation, as it were, of a profound biological transition. Women become more suggestible and more given to phantasies, just as in puberty. "The frequent depressions during the climacterium con-

tain justified grief in the face of a declining world. Depressed moods connected with feelings of inferiority are also frequent in adolescents." Sublimation is very important to forestall any breakdowns. Regardless of her primarily psychological approach to the subject, she suggests that "in the future many difficulties of the climacterium may be avoided through the influencing of the endocrine apparatus."

METHOD

The patients were seen in one or more interviews. In some cases relatives were also interviewed. A psychiatric and social history was taken, and an appraisal was made of the patient's present psychological state. In all but 5 cases a Rorschach test was administered. The data thus obtained were supplemented from the medical record and by the social service department. Follow-up studies were made whenever possible.

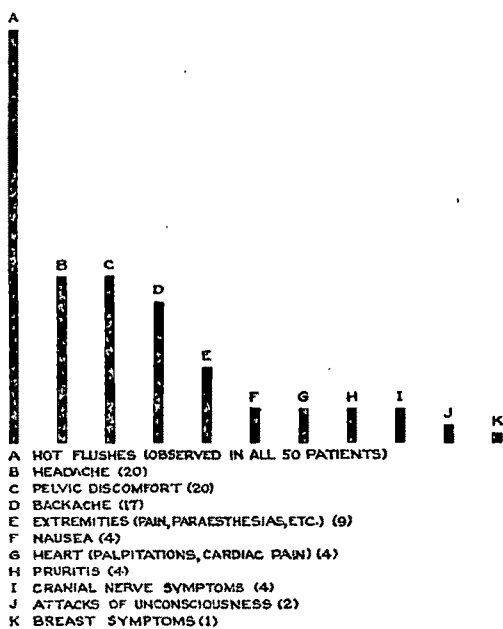
SUBJECTS

Fifty patients who attended the medical or gynecological outdoor departments and in whom the diagnosis of menopausal syndrome had been made on the basis of physical findings, were examined. "Menopause" in the literal sense was present in 40 cases; in the 10 remaining there was no cessation of menses but the diagnosis had been made on the basis of clinical symptoms, gynecological examination and laboratory data. Of the 40 strictly menopausal ones *i.e.*, those in whom menstruation had ceased, 23 had undergone an artificial menopause, 22 by surgical procedure, one by radium. Patients who had primarily been sent to a psychiatrist were excluded from this study. However, in 23 cases emotional symptoms appeared so marked that a psychiatrist was consulted at one time or another during their period of attendance to those outdoor departments. The remaining 27 would not have been seen by a psychiatrist had it not been for this study. The range in ages was from 33 to 58 years. Only 19 were Canadian, 11 were immigrants from the British Isles, and the remainder originated from the European continent. All patients were of a poor or marginal economic class.

RESULTS

By the time they were seen most women had attended one of the outdoors over a considerable period for treatment of the so-called "menopausal syndrome." Symptoms diagnosed as menopausal had been there for several years in most cases. In those women who in their own opinion or in the opinion of their physician needed psychiatric help the average duration, by the time they were seen by us, was 5.15 years; among the remaining ones it was 3.34 years.

Physical symptoms.—Graph 1 shows the



GRAPH 1.—Pattern of physical complaints.

frequency of physical symptoms among the entire group. We see that hot flushes were present in every case. Next in frequency came headache, abdominal discomfort, backache and painful sensations in the limbs. In 3 of the latter cases the diagnosis of arthritis had been made. The headache is always felt in the middle parietal or occipital region, and occurs most frequently in the morning. The backache occurs in the evening, or, in some cases, is continuous. The abdominal discomfort is usually referred to the pelvic area. Most frequently it is continuous. It is rarely described merely as pain. The patient characteristically uses somewhat complex symbols: "It is like a heavy pressure,"

"I have a frightening feeling down here," "It starts here and goes higher and higher," "I feel all swollen up," and "It is a feeling as if somebody had kicked me."

The paraesthesias consisted either of those of the peripheral nerves (short attacks of pins and needles in the distal parts of the extremities) or of the special senses (bitter taste in mouth, sounds in the ears). It is interesting to note that complaints referable to the heart (pain in the cardiac area, palpitations) occurred in only 4 cases (8%).

Emotional pattern.—Forty-one patients (82%) complained of being depressed. It is impossible to give a quantitative index of the depressive reaction but suffice it to say that it varied in intensity from a vague complaint of feeling "blue" to serious degrees with complete inability to work, severe insomnia and a sense of utter hopelessness. A rough index of the severity can be obtained from the fact that in 23 cases the mood disturbances were the predominating symptoms, so that at one time or another the gynecologist or internist called in the psychiatrist before the present study was made a routine procedure, or irrespective of it. The depression had several characteristic features. Firstly, it was frequently poor in content. "I worry about nothing." "I could cry day and night," "I cry about nothing," "I am all nerves." Where there was a content present it consisted of understandable causes from the patient's past or present situation, causes of which the patient was conscious. A woman with a bad marital background said: "I have little interest in anything. Life is flat. I keep on thinking; I am worried, worried, worried." Thus, the factor which, in the opinion of relatives, social workers and examiners, predisposed the patient towards her depressive reaction, at the same time formed the main conscious pre-occupation. Table 1 gives a survey of these causes.

Secondly, in all cases but one, guilt feelings or tendencies towards self-accusation were completely absent. Even in the particular case ideas of guilt were not of central importance, came out only at a certain point of the history, and lacked the incongruity which is often so characteristic of such ideas in functional affective disturbances. Thus

woman had performed an artificial abortion after having had one child. "After I had done it I could not forgive myself, it was like murder." She described vividly the embryo ("It was like a chick, a bird") and she said that her maternal feelings were very much upset.

Something resembling ideas of reference occurred only in one case. This woman said that for some time during her condition she did not want to go out because she thought that people were talking about her. In this particular case there were marked language difficulties so that this remark could not be evaluated any further.

Thirdly, the flow of thought was as a whole not disturbed. Even the severely depressed patients were not agitated; only in one case was there a suggestion of retardation. The depression was in most cases con-

Mrs. R. A. H., age 47. "I get into a peculiar tension. People take very easily to me and tell me about their particular problems. And when they do so, particularly in the office, after they go on talking for a certain while I have to hold on to the table because I feel like screaming."

Heredity.—Positive hereditary history was present in 6 cases. There was a history of heredity in 2 out of 23 cases with outspoken depression.

"Nervous child."—Nine patients described themselves as "nervous children," giving such criteria as enuresis (2), undue fears, temper tantrums and nail biting. Four belonged to the group with marked depression.

Childhood milieu.—Fifteen patients described their childhood as unhappy. Nine of these were patients with marked depression (43% of this group).

"Causes" of depressive reaction.—The following is a list of chief causes contributing to the patients depressive reaction. These "causes" are listed according to whatever physicians, social workers, relatives and frequently the patient herself, regarded as the main precipitating factor. It seems characteristic of the social and constitutional group examined that many of these "causes" are very crude, obvious and understandable.

1. Husband alcoholic, cruel; separation.
2. Husband cruel; separation.
3. Alcoholism of husband, cruelty.
4. Alcoholism of husband, early impotence.
5. Husband impotent since beginning of marriage 30 years ago.
6. Bigamy with fear of discovery; both husbands died in mental hospitals.
7. Husband alcoholic and gambler; no sex relations for several years.
8. Lost two out of three children of school age.
9. Simple adult maladjustment ("bad stepmother" situation).
10. Marital maladjustment.
11. Economic and social backslide.
12. Husband impotent for 19 years (after three years' marriage).
13. Marital maladjustment.
14. Marital maladjustment with cruelty.
15. Husband's alcoholism; cruelty; separation.
16. Husband's alcoholism; cruelty; separation.
17. Simple adult maladjustment.
18. One son died, other severely wounded on D-Day.
19. Marital maladjustment.
20. Marital maladjustment.
21. Husband alcoholic, cruelty; separation.
22. Marital maladjustment.
23. Simple adult maladjustment.

TABLE 1

"CAUSES" OF DEPRESSION IN THE SO-CALLED
DISTURBED GROUP

Cause	No. of patients
Marital maladjustment.....	17
Financial backslide.....	1
Loss of children.....	2
No 'obvious cause'.....	3

tinuous. Five patients described it in terms of short "blue spells" interspersed with normal periods. In some cases this fluctuation was also apparent during the interview when the patient cried explosively.

Anxiety did not occur as a spontaneous complaint. However, 16 patients complained of a feeling of psychic tension expressed in characteristic symbols: "I have an inner trembling," "I have a frightening feeling here (pelvic area)."

The depression was combined with irritability, particularly with oversensitiveness to "people and noises." In 6 cases this irritability was so marked that it formed the predominating spontaneous complaint. It was characteristically combined with the experience of inner tension mentioned above.

Examples.—E. L., age 50. "I am oversensitive to noise. It is not so much human voices but noises such as the closing of doors, the steps of neighbours, etc. They do not necessarily have to be loud noises but they seem to make me feel tense.

Artificial menopause and emotional disturbance.—The incidence of artificial menopause among our patients is indicated by Table 2. In 11 out of these 14 cases there existed severe marital maladjustment before the artificial menopause was carried out.

Relation between emotional pattern and physical symptoms.—

(a) Vasomotor symptoms. The intensity of hot flushes in the untreated patient was graded according to the general experience of the endocrinological outpatient department into three groups: "mild" equals less than one hot flush within 24 hours, "moderate" equals up to three hot flushes within 24 hours, "severe" equals four or more hot flushes within 24 hours. As has been pointed out above, the patients had been grouped, according to features quoted above, into those suffering from menopausal depression in the strict sense and those in whom the emotional concomitants were less

TABLE 2

	Disturbed	Mild
Total	23	27
Artificial menopause ..	14 (61%)	9 (33%)

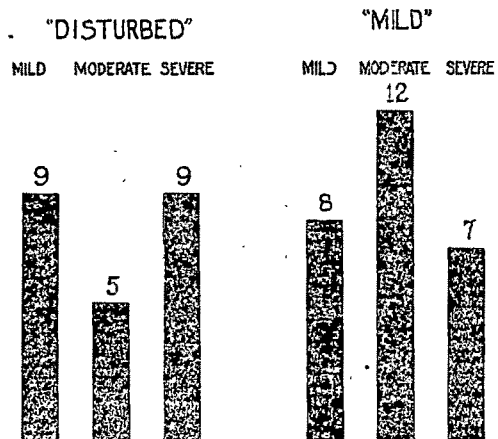
predominating. When tabulating our patients in this way it became obvious that no correlation existed between the intensity of the vasomotor symptoms and that of the emotional disturbances. In fact, there seemed almost an inverted relationship. (See Graph 2.)

(b) Headache and lower back pain. There was no correlation between the incidence of headaches and lower back pain on one hand and the depressive reaction on the other.

(c) Pelvic discomfort. The relation between pelvic discomfort of any type and emotional disturbance was rather marked; 13 of the "disturbed" patients (56%) and 7 of the "mild" cases (26%) complained of lower abdominal pain. (From a statistical analysis it is found that a difference as large as this between the groups could occur by chance in 4 cases out of 100). This was the more remarkable since there was no correlation whatsoever between the incidence of operations and the lower abdominal discomfort.

Arterial hypertension.—Eight patients suffered from arterial hypertension; of these 4 belonged to the "disturbed," 4 to the "mild" group.

Relation between emotional reaction and estrogenic level.—The estrogenic deficiency was gauged by vaginal smears. Thus far this has been carried out in only 13 patients and in view of the smallness of the group no definite conclusions can be drawn. From



GRAPH 2.—Intensity of vasomotor symptoms (hot flushes) in relation to the emotional disturbances. (Explanation see text.)

TABLE 3

	Dis- turbed	Mild	Total
Normal	4	13	17
Frigidity for the greater part of married life.....	4	2	6
Frigidity and dyspareunia....	0	2	2
Originally frigid, now normal.	2	1	3
Originally normal, now frigid.	7	6	13
Complaint of lack of satisfac- tion	3	0	3
No data.....	3	3	6

the few cases so far seen, however, at least at the time the patients were examined psychiatrically, no direct correlation between the degree of estrogenic deficiency and the emotional reaction is apparent. If, as some authors do, one regards the intensity of hot flushes as an indicator of estrogenic deficiency, this impression is reinforced by the data quoted above.

Sexual adjustment.—Data were obtained in 44 cases. They can best be evaluated from Table 3.

Previous breakdowns.—There was a history of previous breakdowns in 3 cases. One woman of 55 had suffered from a reactive depression at the age of 38, following the death of a son. One (age 54) had at the age of 33 a history of "nervous prostration" lasting six months. This was a reaction to her sister's moving to Vancouver (patient described a "very bad step-mother situation"). One patient (age 45) had at the age of 34 a "nervous breakdown with insomnia, due to overwork" ("in this case there was a very bad marital setting which had led to separation when she was 23; at the time of the nervous breakdown she was living in common law marriage

responses is 14. Apart from this there are two features quite marked, i.e., "coarctation" and a characteristic manner of approach. Coarctation is indicative of an "inhibitory, inert and relatively colourless type of psychiatric symptomatology which, however, may occasionally have violent flare-ups" (Rapaport 1946). Thirty of 45 patients showed signs of coarctation as evaluated by Rapaport (1946). The manner of approach was indicative of a basic insecurity with a tendency to evasive generalities and a fear of committing oneself. Only 14 cases showed responses to small details, and these never exceeded 4 in number. In 25 cases the emphasis was on W (W>D).

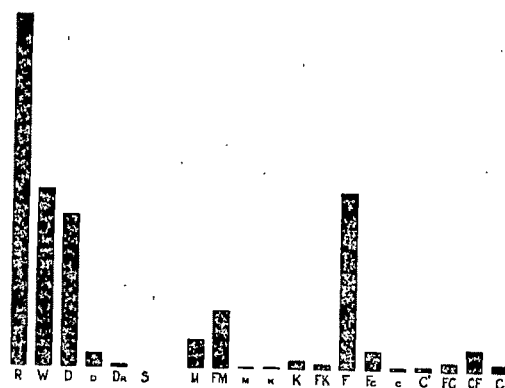
TABLE 4

Trait	Total 50	Disturbed 23	Mild 27
Under active	0	0	0
Seclusive	3	2	1
Anxious	5	2	3
Very religious	1	1	0
Shiftless	0	0	0
Autistic	0	0	0
Pedantic	0	0	0
Prudish	5	1	4
Aggressive	6	3	3
Tolerant	46	23	23
Stubborn	4	2	2
Sociable	33	17	16
Timid	12	4	8
Pleasant	48	24	24
Hypochondriacal ..	2	1	1
Sensitive	9	6	3

with a man who is now her husband). At that time she spent 2 months in a general hospital.

Premorbid personality.—In view of the fact that one of the purposes of the present investigation was to delineate as clearly as possible the emotional concomitants of the menopause from other breakdowns characteristic of the involutional period, we purposely adopted the traits as formulated by previous investigators, particularly Malamud *et al.* (1941) and Titley (1936), only slightly modified.

Rorschach results.—The Rorschach findings will be discussed in full detail in a separate study. Graph 3 shows a compound psychogram of all the patients. Characteristic of this psychogram is the general impoverishment. The average total number of



GRAPH 3.—Compound picture of psychograms of 45 cases.

The form percentage was more than 50 in 22 of 45 cases.

Thirty-three out of 45 cases showed 5 or more of the so-called "neurotic" signs of Miale and Harrower (1940).

In the evaluation of these features one has to be careful because the patients all belonged to a definite social group. However, the combination of high form percentage, coarctation and the high incidence of the so-called "neurotic" signs are consistent with the assumption of a reactive depression on the basis of pre-existing maladjustment.

DISCUSSION

The clinical picture encountered in our cases is surprisingly uniform. The overt psychiatric disturbance is one of a reactive depression which has its roots in a maladjustment usually preceding the menopause.

It is obvious from the data given above that the majority of women coming for more than one medical or gynecological consultation on account of the "menopausal" syndrome show signs of such maladjustment. The line which was drawn between "disturbed" and "mild" cases had to be somewhat arbitrary. What cannot be shown by a merely quantitative analysis is the fact that the cases with severe depressive reaction presented only an exaggeration, in degree, of what was present in most patients.

From the pattern of the emotional disturbance the difference is quite apparent between this reaction and what is commonly designated as involuntional melancholia. We saw that a tendency to self-accusation or to paranoid trends was practically absent in these cases, and that the stream of mental activity was unchanged. It is remarkable that Farrar and Franks (1931) found among psychoses associated with the menopause that in about one-third of the cases the picture was one of reactive depression, "reactions to outside causes in which the mental state might be regarded as appropriate to the situation except for its morbid exaggeration." It is not apparent from that paper how far these depressions differ in time relation and somatic symptomatology from the other groups discussed but it has been emphasized that involuntional psychoses proper "frequently develop long after or even before the onset of the endocrine changes and seem to be much more closely related to other factors in life of the patient" (Malamud *et al.*, 1941), and the precipitation factors are commonly of a sudden, catastrophic nature.

It has been shown that for an understanding of the dynamics of involuntional breakdowns the premorbid personality traits are significant (Titley, 1936; Palmer and Sherman, 1938; Malamud *et al.*, 1941). The last-mentioned authors describe certain constellations of traits which were frequent among the patients studied: "(a) the hard-driving, aggressive, conscientious and stubborn, (b) the seclusive, autistic, under active and prudish, (c) the sensitive, timid and hypochondriacal." These constellations are not at all applicable to the type of patient seen in this study. The majority of patients were women of considerable emotional

warmth with whom rapport was immediately established and who seemed glad to be able to "open up." Moreover, there was evidence, in their life histories, of pliability and a readiness for practical compromise.

"Menopausal depression," therefore, is a characteristic disturbance, different from other breakdowns occurring during the climacteric period. It corresponds to what Farrar and Franks (1931) described as "reactive depressions" among their patients and probably to the "simple form" of disturbances which Merson (1876) had distinguished much earlier. What then, apart from the time relation, makes these reactions specifically "menopausal"?

We have seen that the causes for the patient's emotional reaction were chiefly associated with marriage and reproduction. Furthermore, we saw that there was apparently no parallel between the intensity of emotional disturbance on one hand, and the degree of hot flushes and estrogenic deficiency on the other. In going over the list of symptoms there seemed, however, a parallel between the intensity of emotional disturbance and subjective complaints referable to the pelvic area. At first sight these facts suggest that the association between emotional background and menopausal symptoms comes close to being on an ideational and symbolic rather than physiological level. However, a glance through our case material shows that this is not the whole explanation. Our observations on this point have to be taken only as exploratory, and have yet to be substantiated by control material. Nevertheless, the following case examples illustrate the nature of the disturbing factor on one hand, and the symptom and sign on the other, and the time relation between the two.

H. F., age 42. Irregularity of menses and moderate hot flushes for 6 months.

A woman of dark complexion, middle height, pyknic body build. She has a sad expression on her face, and when depressing facts are mentioned, she stops talking and her eyes fill with tears. However, during the latter part of the interview she also responds to an occasional joke with a smile.

Apart from the signs mentioned above she describes her complaints with almost endless details. At various occasions when the examiner looks up from his notes she interrupts herself, saying,

"This is not all," and carries on with a minute description of her aches and pains. She suffers from intense pelvic discomfort, backache and headache; frequently she feels cold. "I cannot go on with my duties when I go shopping and come home with parcels. I cannot go on and I have to lie down."

She describes her childhood history and her marriage as happy, but dwells at length on the history of her three children. Two years after marriage they had a girl who, however, died at the age of 4 of meningitis. Six years after the birth of that girl a boy was born, now 10 years old, and seems to be, from her description, just a normal child. Three years after this she had another girl who was quite strong and healthy at first but her "bile was blocked." She had to be operated at the age of two months and died. When asked how she reacted to the children's deaths at the time she says that she felt little. "Of course I cried." "Now I am sick and I don't want to remember." When asked whether, when awake, she thinks of the past more than of the future, she says, "I think more of my body because I have so much pain." The following remark seems to be very characteristic. She and her husband sleep in the same room with their boy of ten and with reference to ordinary colds which the boy has, she says, "The moment he coughs I get pains down here,—it is not that I get frightened but I get pains."

This case is characteristic of conversion symptoms with a rather primitive obvious significance.

M. B., age 54. Unmarried schoolteacher.

Artificial menopause by radium 10 years ago. Hot flushes day and night. Her "legs give way"; overwhelming fatigue and a feeling of listlessness and despondency. Severe pains in arms and legs ever since her menstruation stopped.

Patient describes her mother as "very pretty," "a lovely figure," "beautiful." She died at the age of 33 during her pregnancy, when the patient was only 4 years old. There were 2 daughters out of this marriage. Two years later, when the patient was 6, the father married again. There is an endless story of her "very jealous" stepmother.

The following points from the history are noteworthy. At the age of 17, after the first "show-down" with the stepmother, the patient had loss of weight and amenorrhoea for one year, but no emotional concomitants which she can remember now. When she was 33 her only sister (all the others were stepbrothers or stepsisters to whom she was less emotionally attached) moved to Vancouver; following this the patient developed severe pains in all her limbs which were regarded at the time as a sign of "nervous collapse." She was hospitalized and nothing organic could be found. These pains were of the same type as those she developed later during her menopause. When she was 44 her father died. While he was dying there were very dramatic scenes with the stepmother. During one of these she developed suddenly a

severe metrorrhagia. She remembers that she had to receive ergot to be able to attend the father's funeral. Two months after the father's death she had another severe metrorrhagia which prompted her physician to produce artificial menopause by radium.

The time relations in this case suggest conversion symptoms. Contrary to the preceding case, however, there was always a tendency to react to emotional stress with objective uterine dysfunction.

R. S., age 45. Married, no children.

Pyknic. Hysterectomy at the age of 30. She complains of depression, "nervousness," "heart is beating all the time," headache, backache, hot flushes for five years.

Patient describes her childhood as happy. She resembles her mother. "I am like my mother, everybody says so. I feel like my mother. She had a poisoned toe, I have the same thing." Patient is the third of five children.

Her first period at the age of 13 upset her terribly, and she cried a lot. She says that she was "passionate" before marriage but "did not do anything." Marriage at the age of 28 to a man who was one year older. The husband suffered from premature ejaculation, which soon developed into impotence. It was also found that he was sterile. Soon after marriage she developed severe dysmenorrhoea with metrorrhagia, and two years afterwards a hysterectomy was performed. It is noteworthy that while the family history was taken the patient interrupted herself and volunteered the following statement: "For that I am suffering . . . because I have no children. I saw my mother was all right and my sister who had ten children is all right too."

The dysmenorrhoea and hypermenorrhoea which led to hysterectomy began after she had discovered that her husband was impotent and sterile. The fact that she has no children now presents the main content of her depression. In this case we were unable to find out what anatomical diagnosis had indicated a hysterectomy.

There are 10 more among our 22 cases of artificial menopause in which the hysterectomy was preceded by a period of very serious marital stress. However, as pointed out above, our observations on this point are not well enough controlled to allow any definite conclusions. This problem is of sufficient practical importance to warrant another study. Suffice it to say that a descriptive study of single cases suggests very strongly that the "conversion" mechanism in these cases refers not only to subjective pelvic complaints but to uterine dysfunction.

Thus we see that the reactive depression which we call "menopausal" is only an accentuation of a maladjustment which has been present before. The "menopausal" part of it *i.e.*, those signs and symptoms which make the patient primarily consult a physician or gynecologist rather than a psychiatrist, is due to complex mechanism of conversion which are partly ideational-symbolic, partly physiological. The ideational-symbolic component is easily understood. The patient with a tragic marital situation feels either "hurt" ("It is a feeling down here as if somebody had kicked me") or "endangered" ("I have a frightening feeling down here") in the area of the reproductive organs. The physiological component is much more obscure. Little is known so far about the central-nervous pathways concerned with the oestrous cycle.

Our cases showed many features which suggest that an intensive qualitative study of single cases, rather than an extensive quantitative one, would have yielded material very significant for the genesis of this reaction. In several of the cases, for instance, with violently injurious marital setup, we obtained the impression that something in the patient's own psychosexual development had brought her into this situation.

After surveying our case material we agree with Buxton (1944) that so-called menopausal patients are "in need of psychiatric care and socio-economic adjustment." We also agree with Hoskins (1944) and Deutsch (1945) that the true aim of a rational psychotherapy would be sublimation. Many of the patients, however, lack the inner resources required for the attainment of this goal. Therefore in most cases the therapy has to remain symptomatic, and the prognostic outlook is not favourable.

SUMMARY AND CONCLUSIONS

Fifty patients who attended a medical or gynecological outdoor department with the diagnosis of "menopausal syndrome" were examined psychiatrically with interviews, social histories and, in all but 5 cases, Rorschach tests.

In 23 cases the emotional disturbances were the chief spontaneous complaint so

that a psychiatrist had been called in as consultant. The remaining 27 cases would not have been seen by a psychiatrist, had it not been for this study.

"Menopausal depression" is a uniform clinical picture; it is a reactive depression which presents only an accentuation of a previously existing maladjustment. It is clearly distinguishable from other so-called involutional disorders. The "causes" of this depression in the group examined are most frequently crude and obvious. They are almost exclusively associated with marriage and reproduction.

The patient's premorbid personality differs essentially from that described by previous authors as characteristic of involutional psychoses.

There is no correlation between the intensity of hot flushes on one hand and the severity of the emotional disturbance on the other. There does not appear to be any correlation between estrogenic deficiency and the severity of the emotional disturbance. Among complaints, pelvic pain is most intimately associated with the more severe forms of maladjustment.

Considerably more of the cases of artificial menopause were found among the severely maladjusted women. In the majority of these cases, however, the injurious life situation preceded the artificial menopause. A qualitative descriptive study of these cases suggests that the patients reacted to psychological traumas with uterine dysfunction.

From this it appears that the "menopausal" character of these depressive reactions is due to an additional conversion mechanism. An attempt is being made to explain this mechanism on the basis of our case studies.

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PSYCHIATRIC FACTORS IN MEDICAL STUDENTS WHO FAIL¹

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The need for some adequate means of selection of students for medical school has long been apparent. Some years ago the Moss Aptitude Test was developed and is still being used. This test does not appear to be a satisfactory screen at the University of Michigan. Some students with high aptitude ratings fail and some with low ratings succeed. Beginning in the spring of 1939 at the University of Michigan Medical School, a small group of failing students was examined in the department of psychiatry in an attempt to determine the cause of failure. The discovery of the psychological difficulties, emotional maladjustment, poor study habits and poor reading habits among these students led to an attempt to set up a useful battery of tests, which, with the psychiatric examination, might serve to determine which failing students could be salvaged. It was hoped that these procedures ultimately might be extended to serve as an admission filter. The results of these students as well as the various tests tried and later rejected will be discussed.

Shortly after the study was begun in 1939, the promotion board of the medical school began using the results of these examinations to determine whether a student should stay in school or be dropped. Similarly, the dean and the admissions committee sent many students for examination as part of the admission procedures. The recommendation from the psychological findings was based on a type of analysis of psychometric results similar to that described by Rappaport as "Diagnostic Testing." This type of analysis is less concerned with the actual numerical scores earned by the examinees than with other findings of such factors as difficulty with abstract thinking, extreme emotional tension during the examination or mental confusion. The results of these studies were

then coordinated with the psychiatric examination and a final report was made to the dean of the medical school.

Certain tests were tried and later discarded. The Grace Arthur Performance Test was soon dropped because usually the scores earned by our subjects fell beyond the published norms. The Traxler High School Reading Test which was used for reading rates was later dropped when it was shown to have no constant correlation with accurate retention of or comprehension of written materials with our subjects. The Progressive Achievement Tests, Advanced Battery, was used for reading comprehension and vocabulary but was dropped when routine group testing was started as it required more time to administer and was harder to score than the Nelson-Denny Reading Test. The Strong Vocation Interest Inventory was tried and dropped as almost without exception the students earned high scores in medical interests. Several personality inventories, among them the Bernreuter and the Humm-Wadsworth were likewise disappointing. Through this series of tests we were made increasingly aware of the relatively important rôle played by emotional stability, good situational adjustment and motivation. Among students with even very high I. Q.'s a relatively minor maladjustment occasionally resulted in academic difficulties. They could usually be remedied by brief psychotherapy. On the other hand, it appeared that strong motivation and good adjustment could often compensate for an I. Q. which under average circumstances would be considered inadequate.

In addition to this preliminary study which embraced a total of 135 failing students or applicants for admission, we were able to study the 10 sophomores who had the highest freshman class average in June, 1940. Their Binet I. Q.'s ranged from 128 to 149, their Grace Arthur Performance I. Q.'s from 112 to 150. Their reading vocabulary scores

¹ Read at the one hundred and second annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

were uniformly good as measured by the Progressive Achievement Test and were all above the 90th percentile for college freshmen. Reading comprehension on the same test varied from the 55th to the 99th percentiles. The most important finding was that with two exceptions they showed no emotional breakdown on the tests and were able to work at full capacity during the procedure. These 2 men were beginning to have some difficulty with sophomore subjects. One of them had a Binet I. Q. of 148 and an Arthur I. Q. of 122; the other had a Binet I. Q. of 128 and an Arthur I. Q. of 150. Both of these men ultimately were graduated with their class. Of the remaining 8, one transferred to the Harvard Medical School and 7 were graduated with distinction.

In the spring of 1943, funds became available with which it was possible to employ an additional psychologist so that routine testing of the 148 freshmen then in the medical school could be undertaken. The tests chosen for the battery and the reason for their choice were as follows:

Revised Stanford Binet Form L.—This test yields an I. Q. which is readily interpreted by most persons interested in this type of problem.

The Wechsler-Bellevue Adult and Adolescent Scale.—Here we have the advantage of additional material, especially the performance test, the Wechsler system of equated weighted scores, and adult standardization.

The California Test of Mental Maturity.—This test was not too well known, hence probably would be new to the subjects, and had the advantages of group presentation and of individual standardization of subtests which would yield a scatter pattern.

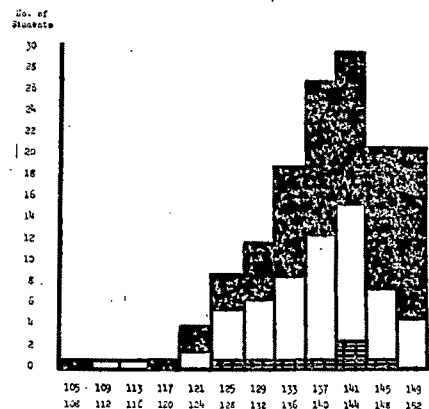
The Nelson-Denny Reading Test for High School and College Students.—Its advantages were ease of administration and scoring, and we felt that reading was an important tool for medical students. Results of this test were discussed with the students and suggestions offered where needed.

The Wrenn Study Habits Inventory.—This easily administered and scored test forced the student's attention to his study habits, yielded a numerical score and could be used as a basis for advising the student.

Shipley-Hartford Retreat Test for Mental Deterioration.—We felt that as most of our failures were associated with psychological difficulties this test might yield useful information.

Rorschach Examination.—This procedure was chosen as being the best possible, fairly well standardized, method of studying the personality of the student.

Out of the original experimental group of 148 students, only 8 were dropped from the medical school for academic failure, although 47 percent incurred one or more grades of D. An additional 9 withdrew or dropped back one year for reasons of finance, health, and in one case poor grades. The figures are arranged as follows: Data for each test were



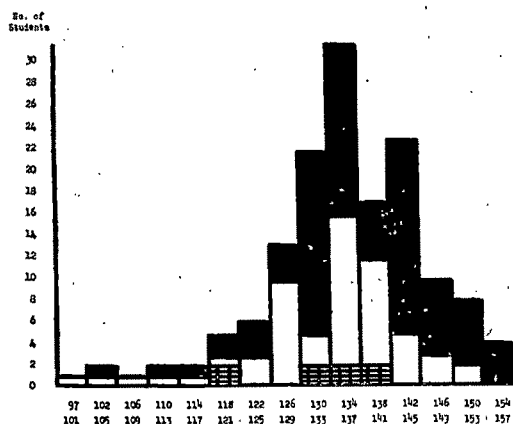


FIG. 2.—Wechsler-Bellevue full scale weighted scores.

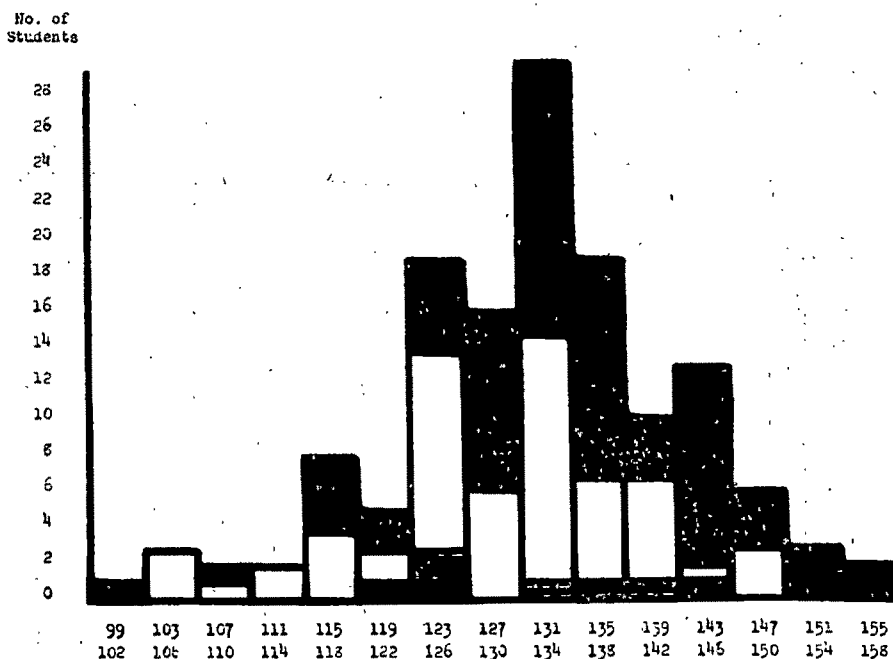


FIG. 3.—California Test of Mental Maturity, full scale I. Q.'s.

Fig. 2 shows the Wechsler-Bellevue results expressed in total weighted scores rather than in the less spread out I. Q.'s. Separate graphs of the verbal and of the performance scale were made but similar distributions were found. In general, the results yielded by the Wechsler, either whole or part scores, agree well with the Binet findings.

Fig. 3 presents the results of the full scale of the California Test of Mental Maturity. The class intervals are in terms of the

I. Q. Again there are no advantages in using the language or the non-language scales separately. While there may be some relation between scores and success it is certainly not sufficient to use in predicting success.

Fig. 4 gives the distribution of vocabulary scores on the Nelson-Denny Reading Tests.

Fig. 5 shows similar results for Nelson-Denny Paragraph Meaning and Interpretation Scores.

Fig. 6 presents the Wrenn Study Habits Inventory Scores.

Fig. 7 gives the Shipley-Hartford Retreat Test for Mental Deterioration scores in terms of conceptual quotients.

Fig. 8 gives the results of the Moss Medical Aptitude Tests in terms of percentiles as reported to the medical school for the 78 students who had taken the test.

In the case of 2 students, psychiatric examinations uncovered conflict as the result of a desire to study medicine and a sense of duty with respect to military service. Two students were simply following out the family tradition of medicine and their medical school difficulty reflected a parental conflict. Adequate motivation was lacking

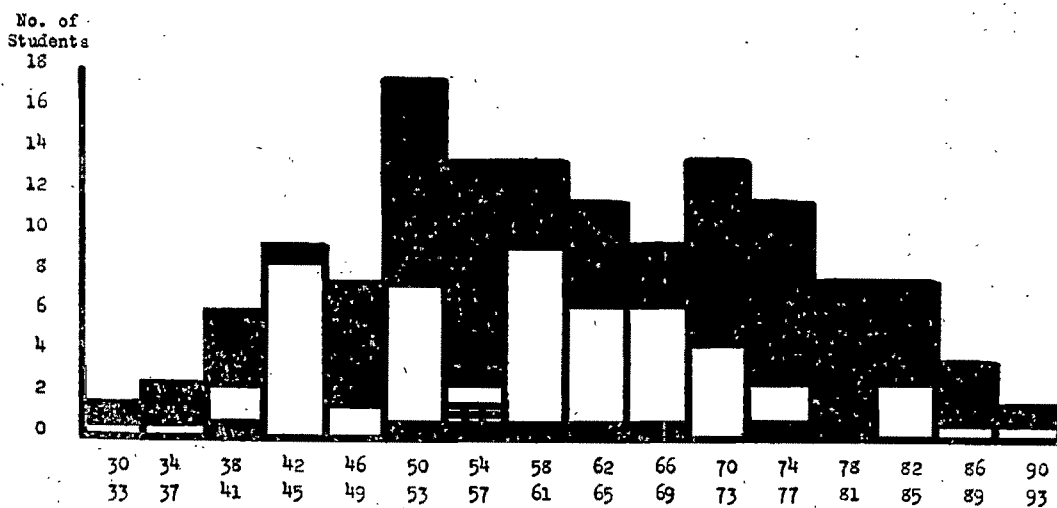


FIG. 4.—Nelson-Denny Reading Test, vocabulary percentiles (college senior norms).

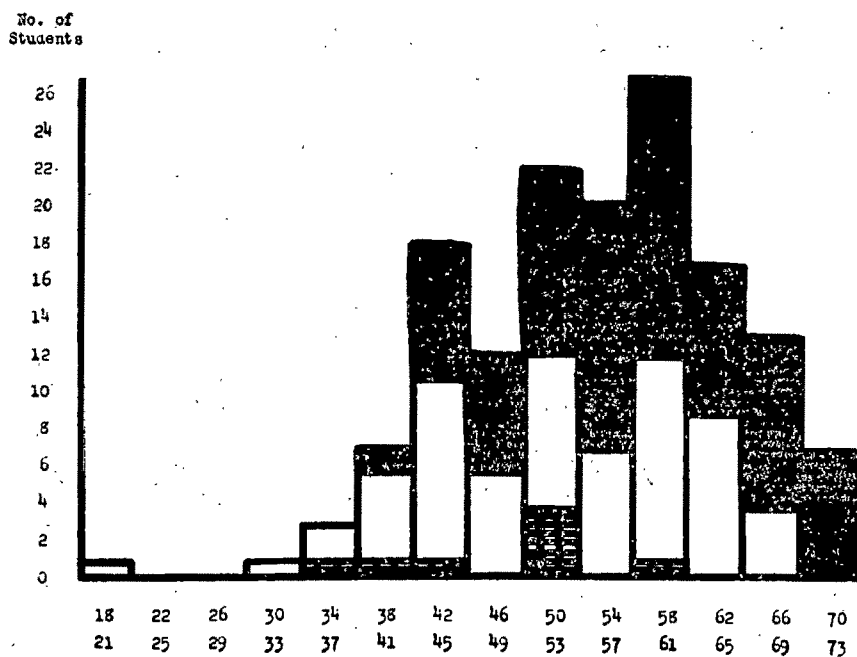


FIG. 5.—Nelson-Denny Reading Test, paragraph meaning and interpretation percentiles (college senior norms).

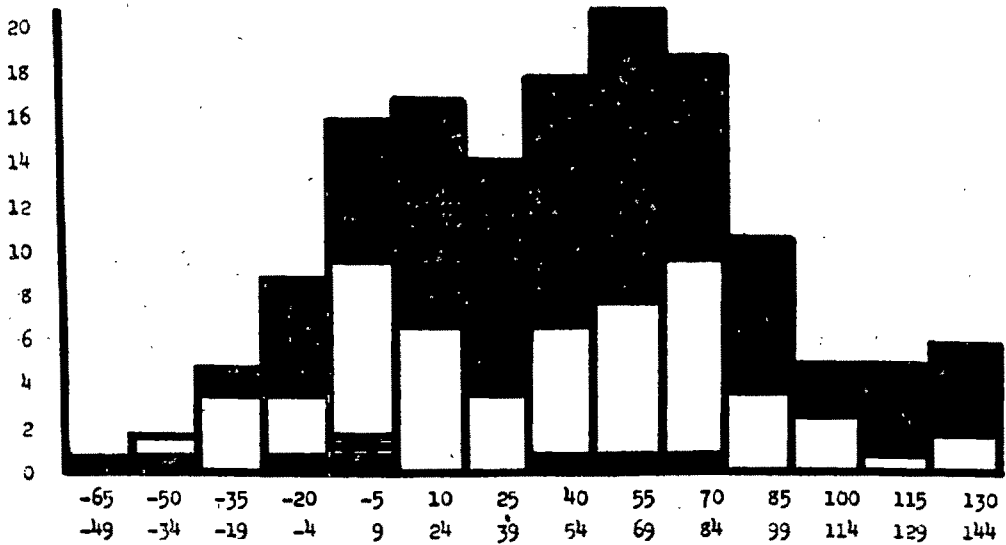
No. of
Students

FIG. 6.—Wrenn Study Habits Inventory, algebraic sum of scores.

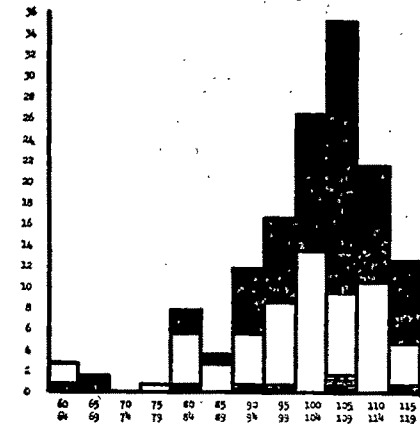
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FIG. 7.—Shipley-Hartford Retreat Test for Mental Deterioration, conceptual quotients.

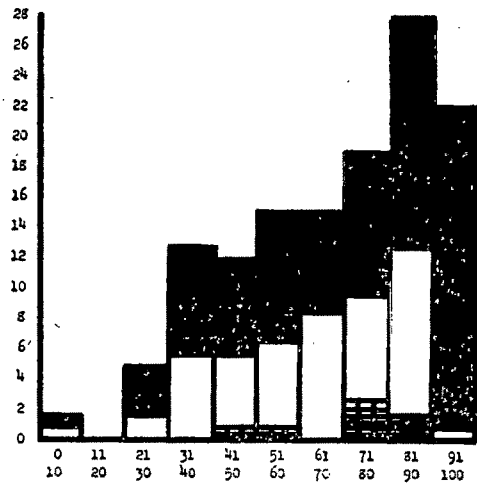
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FIG. 8.—Moss Medical Aptitude Test, percentile scores (78 students).

in these as well as other cases. Two were involved in serious sexual conflict. Two were unable to discuss their problems with the examiner; one of these was blocked and showed flattened affect. One, aged 35, was successful in public health education and entered medical school because he felt that a medical degree would make it possible to go farther in his profession. His age led to problems of adjustment with students and faculty in the medical school.

From the above it is obvious that the outstanding problems in these failing students would not be brought out in any one type of tests nor by any numerical scoring system. Emotional maladjustment, lack of sufficient motivation, lack of ability, or a combination of two or more of these were the causes of failure.

From the foregoing figures, it is apparent that no one of the tests reported yields scores which can be trusted to predict academic success at the University of Michigan Medical School. It is felt that brief summaries of the records of the successful students with low Binet I. Q. as well as those of the failed students would be of interest.

The students with low I. Q., who were successful, showed good approach to the test situation. They were attentive, worked hard and were not disorganized by failure on one or more test items. Their ability for "abstract" thinking while not high was commensurate with their intellectual level. They showed good ability to memorize connected material.

On Rorschach examination there was evidence of striving, constricted personality as well as some degree of immaturity and anxiety. None of these factors was associated with impairment of intellectual efficiency and in general the Rorschach patterns were similar to those of the whole medical class. Of this low I. Q. group, 2 were apparently of superior intelligence but, because of their foreign language background, their intelligence scores were deceptively low.

Of the 8 failing students, Rorschach examination showed definite disturbance in the 7 cases in which it was available. All showed some evidence of immaturity, and

5 were definitely prone to impulsive response under environmental emotional impact. Two showed a rather severe tendency to withdraw from reality. The pattern of extreme striving was obvious throughout the group as well. All but one showed evidence of immaturity. In the psychologist's write-up references to emotional disturbance and questionable difficulty with abstract problems abound, showing that the patient's performance on psychological testing was uneven although the final I. Q.'s were within a satisfactory range.

This study was first set up in an attempt to determine some of the factors which caused students to fail in the medical school at the University of Michigan. It seemed likely that an adequate psychological and psychiatric study would bring to the surface some of the reasons for failure. Psychometric studies sometimes gave evidence of intellectual incapacity. In other cases the psychological studies showed evidence of adequate intellectual ability but there was still academic failure. In most of these instances, information indicating conflictual situations of one sort or another was obtained by psychiatric interview. Rorschach studies frequently gave information of value or resulted in leads which would indicate the trend to be taken by the psychiatric interview.

The consistent correlation between the Rorschach studies and the psychiatric interview was significant. We believe that a proper correlation of the psychological tests with the Rorschach and the final correlation of these with the psychiatric interview enabled us to make a fairly accurate prognosis of the individual's ability to succeed in medical school work. In a number of instances in which the student was doing failing work and in which the studies indicated problems likely to be amenable to treatment, the student was retained in medical school at our request in spite of the fact that his record was such as to indicate that he ought to be dropped. In only one of these cases, in which we sincerely felt that by therapy the individual would be able to make a satisfactory medical school adjustment, were we wrong. In a number of

instances, students who were doing failing work in the medical school improved sufficiently after therapy to graduate with good records.

In several instances where we recommended that the student be dropped because of some serious personality defect, later developments proved that our recommendations were correct. One boy who was beginning to have some difficulty, although his record in the main was good, was referred to us for study. The Rorschach demonstrated evidence of strong schizoid trends. The psychiatric examination suggested that these trends were of sufficiently serious nature to warrant the boy's removal from the medical school. Somewhat more than a year later, we had a request for information from an institution in the East where he had become a patient with a well-developed schizophrenia.

Factors which seemed important in order that a satisfactory medical school record be made seemed to be divided roughly into three parts: (1) psychological factors such as intelligence, ability to read rapidly and well, and vocabulary; (2) a personality structure which enables the student to sustain the emotional stresses associated with medical school work; and (3) a relative freedom, at least in most instances, from situational stresses which produce conflict and so reduce the student's efficiency of work that he is unable to acquire satisfactorily the material necessary to meet the level of accomplishment established by the medical school.

It has been determined by these studies and by our experience that in numerous instances these latter factors can be so influenced by therapy that the individual can go on and do satisfactory work. Obviously, we do not know what kind of physicians such individuals will make. I have in mind one student who was given some therapy, was able to complete his medical school work satisfactorily, but has since been doing badly in his hospital adjustment. He had strong schizoid trends and his environmental experiences had been such as to more or less continuously disturb his emotional adjustment. It is our opinion that he did not have

sufficient therapy to reorient himself properly and that this may account for his poor medical adjustment. The question is still open as to whether or not these men ought to be continued in medical school, even though they are able to make a satisfactory record. It is important to remember that we select students for medical school not only on the basis of ability to make a satisfactory academic record but for the intellectual and personality characteristics which will make them good physicians as well.

The dean of our medical school and the promotion board have been sufficiently impressed by the results of these studies to routinely refer students who have any difficulty whatever in the medical school to us for study, if on interview in the dean's office there appears to be any question, either academic or of personality, which indicates the need for such a series of studies. Almost invariably, the recommendation of our department based on these studies is accepted. We believe the relatively low percentage of actual failure in the class reported was related to the fact that failure in one or more courses automatically resulted in adequate psychiatric examination with psychotherapy where indicated. In most instances this was successful in salvaging the worth-while student.

In conclusion, it is obvious that one cannot by the use of any one test predict medical school success. We believe it is advantageous to set an I. Q. limit of 130 on the Binet simply because that is the dividing line between our lower 20 and upper 80 percent. We believe that for students with I. Q.'s below 130 the competition will be severe both in medical school and after graduation. It is probable that where a number of different tests are given a low score on one test may be compensated for by a high score on another, *i.e.*, a poor reading ability may not be crippling when it is associated with high intelligence, or a not too intelligent but highly motivated, well-adjusted boy may be successful. The one test most needed in this field is one for motivation. We have used a crude test of this sort. In certain instances during the psychiatric interview, it is indi-

cated to the student that our report will be unfavorable. The student's reaction to this is noted. If his findings are borderline but his reaction to this situation indicates a strong healthy motivation, we then make a favorable recommendation.

Our results suggest that an adequate psychiatric interview coordinated with a Rorschach examination and certain selected psychological studies properly interpreted will yield information from which an adequate selection of medical students can be made.

A PSYCHIATRIC SCREENING AID FOR PRE-COMBAT TROOPS

LT. COL. OSCAR B. MARKEY, M. C., AND FIRST LT. MILES M. ZISSON, A. G. D.

After a group has been trained technically and physically for combat, one must answer the question: Is it ready to face the surprise and exhaustion attendant with actual combat? Or does that particular group include too many inadequate people who will affect the group adversely and therefore reduce the chances for success of the operation? Although much attention has been given to screening out all possible psychiatric casualties on the induction, reception center and replacement center levels, relatively little has been reported on the study of groups as such, for the determination of group stability and balance. This is all the more important when a group has been finally integrated for a combat experience. Unit commanders and medical officers charged with the care and disposition of soldiers have frequently complained that too many unstable men are being sent into combat and combat support units. The psychiatrist should be on continual watch for such men for the purpose of recommending their reassignment to military occupations which are less apt to produce acute or prolonged emotional strain. True enough, these men will remain a challenge in more protected zones also, but they are more likely to adjust satisfactorily away from the zone of operations. A device which could reveal group capacity for strain, tension, surprise and exhaustion, would be a valuable aid in planning for an operation.

SELECTION AND ADMINISTRATION OF TEST

Consideration was given to several well-known group tests, including the Minnesota multi-phasic, The Cornell selectee index, and the Harrower-Erickson modification of the Rorschach test(1). The Rorschach has long proved its usefulness in the study of individuals and has the advantage of offering unconventionalized images which challenge expression rooted in the deepest layers of the personality. The group Rorschach has the advantages of brevity, ease of administration, and a considerable background of use-

fulness in civilian and military situations(2). Harrower-Erickson's modification(3) is based on the fundamental idea that so-called normal individuals will "see" normal images in the series of ten symmetrical ink blots, while ill-balanced individuals will "see" bizarre or unusual images. Whereas, in the individual test, spontaneous selections are made by the subject, in the group test, ten (10) suggested selections are offered for each card. No effort has been made in this report to discuss the particular advantages or shortcomings of this method or the selections suggested, nor were second choices evaluated. The aim was not experimental, but utilitarian; therefore Harrower-Erickson's method was followed carefully without any significant changes. There was no time for the development of a new or modified psychological tool.

Nine hundred thirty-three (933) soldiers were studied. They constituted a closely-knit army unit being readied for an operation and had been assigned to a wide variety of military occupations on an administrative level. The test was given to groups of about 225 each, in a movie auditorium. Purposes were explained to the men in such a way as to enlist their cooperation. They were apparently pleased with the opportunity to act as an experimental group. Mounted slides were not available at the time, but the original Rorschach cards were satisfactorily projected on the screen(4). Proof of the soldiers' acceptance of their role lay in the fact that only one paper in the entire group had to be discarded. Harrower-Erickson's conditions of administering the test were followed closely. The written directions were read aloud by the examiner after each card was projected on the screen and an adequate number of proctors was available for supervision and help.

EVALUATION AND STANDARDIZATION

The proctors checked the papers under supervision. Their responsibility was to

check the number of "adequate" and "poor" responses. The examiner determined that the total protocol in a given case was "adequate," "doubtful," or "poor." No effort was made to classify the responses by specific diagnosis because (a) the individual test is far more reliable in this respect and (b) the nature of the individual disorder was considered less important than the general emotional inadequacy that it suggested.

In a previous study made by one of these examiners (OBM) in a replacement training center¹ covering groups totalling about 4000 men, the group Rorschach was found to be unsatisfactory because too many men were revealed to be emotionally unstable. It was thought that the difficulty may have been primarily due to too high a set of standards. The assumption is made that any established group can carry only so many inadequates. To define group stability is scientifically impossible, inasmuch as there is no fixed factor in personality evaluation, either of the individual or the group. The individual is compared with himself and the group, the group with itself and other groups, with changes in the individual and the group personality pattern a continual possibility. Where the highest degree of group unity is necessary, as in a battle situation, the percentage of inadequates must be reduced to a true minimum. Where the group is split up into small units and occupations less dependent on unity, a higher percentage of emotional inadequates can be absorbed. Experience suggests that perhaps 85% of "normals" can carry 15% of "inadequates." Six can operate reasonably with one inadequate, but a group of 5 is likely to waver. In Harrower-Erickson's new book, 5 lower standards have been experimented with. If these are followed, a "cutting point" of 5 poor selections is likely to reveal that about 85% of a "normal" group will be shown to be adequate. On this assumption, it was decided that those making:

8, 9, 10 poor responses had *poor* emotional stability.
6 or 7 poor responses had *doubtful* emotional stability.

5 or fewer poor responses had *adequate* emotional stability.

¹ Camp Fannin, Texas, 1944; unpublished.

RESULTS OF STUDY

On the basis of the above standards it was found that:

7.5% had *poor* emotional stability.
11.25% had *doubtful* emotional stability.
81.25% had *adequate* emotional stability.

There were 26 subsections, the largest (designated as "A" Company) being composed of 237 men. It is reasonable to expect that such a large subsection, originally selected substantially along the same qualification standards as the entire group, will cor-

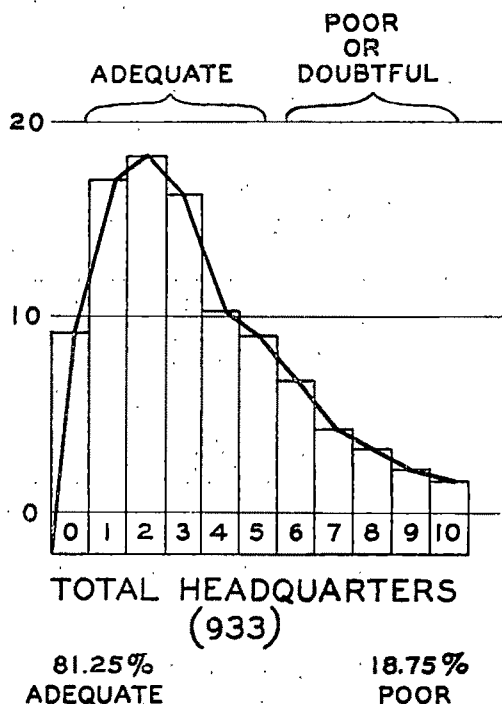


FIG. 1.

relate well with the total group. This is definitely borne out, as follows:

Total group, 81.25% "adequate"; 18.75% "doubtful" or "poor."

"A" Company, 81.44% "adequate"; 18.56% "doubtful" or "poor."

"B" Company, composed of 159 men, had been activated for less specialized occupations and was known to be inferior to the general group in intelligence, performance and general balance. The Rorschach findings bore this out, as follows:

Total group, 81.25% "adequate"; 18.75% "doubtful" or "poor."

"B" Company, 70.44% "adequate"; 29.56% "doubtful" or "poor."

CLINICAL CONTROLS USED

Fifty men were chosen for "blind" psychiatric interviews, done about equally by two examiners. Half had "adequate" and half had "poor" ratings. The interviews, though relatively brief, were comprehensive enough. An explanation was given to each man to relieve his anxiety and to obtain his active cooperation. The correlation was found to be exceedingly high and well beyond the element of chance. Forty-four diagnoses ("adequate," "poor" or "doubtful")

istered to a group is not a reliable aid to individual diagnosis.

COMMENTS AND CONCLUSIONS

1. The group Rorschach (Harrower-Erickson modification) was applied as a device for screening out unstable men in a group being readied for an operation. The results suggest it is a reliable auxiliary to a psychiatric program and that it may be safe as a substitute where time is limited.

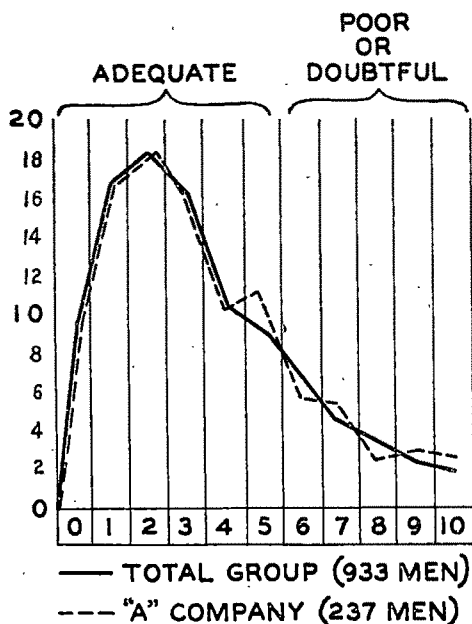


FIG. 2.

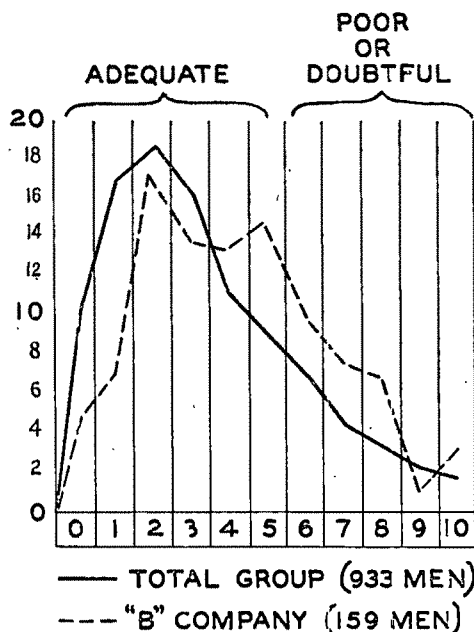


FIG. 3.

emotional balance) confirmed the test pictures. Two diagnoses were doubtful and might have been called confirmatory.

Chiefs of section were then interviewed for two purposes: (a) to compare the group configuration, as revealed by the test, with opinions formed by the interested officers, and (b) to discuss the findings in selected individual cases (especially those showing 10 poor selections). There were no major discrepancies between the opinions expressed and the test results, as far as the group pattern was concerned, even in subsections containing as few as 20 men. This did not hold in the individual cases, however, confirming the belief that the group Rorschach as admin-

2. The main advantage lies in the elicitation of the degree of group stability in terms of percentage of poor risks. Where an arbitrary pattern is previously agreed on by line officers, medical officers and psychiatrist, the test results will indicate favorable or unfavorable deviation from the pattern. "Doubtful" or "poor" men can then be given full psychiatric study and proper disposition. The group test, as given to a group, is not a reliable aid to individual diagnosis, as compared with the original, individually administered Rorschach.

3. Secondary advantages are pronounced, partly because the nature of the test is quite intriguing to officers. As in all tests, the re-

sults and reports accented attention on all the men, especially those who gave poor responses.

4. It is contemplated that the device will be applied to a resting division. One battalion may be screened without the test aid and prognosis on the frequency of psychiatric disorder incident to battle will be compared with that offered in a related battalion screened by the Harrower-Erickson Rorschach method. If the results are favorable, the device will have passed another trial by usefulness.

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PROCEEDINGS OF SOCIETIES

THE AMERICAN PSYCHIATRIC ASSOCIATION

PROCEEDINGS OF ONE HUNDRED AND SECOND ANNUAL MEETING

PALMER HOUSE, CHICAGO, ILL.

MAY 27-30, 1946

MONDAY MORNING SESSION

MAY 27, 1946

The One Hundred and Second Annual Meeting of The American Psychiatric Association convened in the Grand Ballroom, Palmer House, Chicago, at ten o'clock, President Karl M. Bowman presiding.

CHAIRMAN BOWMAN.—I will call the meeting to order, and we will have the invocation by Rabbi Mann.

RABBI LOUIS L. MANN.—Our Heavenly Father, we thank Thee for Thy manifold blessings which Thou hast bestowed upon us day by day. We thank Thee for the blessings of home and love and friendship, for all of the influences that enter our lives and mould our characters, and strengthen our wills. Help us to live the life that Thou would have us live.

We thank Thee for the blessings of this, our native land, and we pray Thee in these critical days for vision and understanding, and as we thank Thee for having won the war, so we pray unto Thee for strength to win the peace. We appeal to Thee for understanding, for vision, for the cooperation of all men everywhere for good, that countries everywhere might ultimately be united, that human beings everywhere may unite and live a normal, complete and wholesome life.

We thank Thee for the psychiatrists who devote their lives to the alleviation of human suffering and the prolongation of human life. We thank Thee for every influence that makes for the good and the true of the future. We thank Thee that we have eyes that are not greedy as the less fortunate reach toward us, and that we have not turned a deaf ear toward their distress, that our hearts have not been callous.

May the words of our lips, the meditations of our hearts, be exemplified in the deeds of our lives, and be acceptable to Thee, oh, God, our Saint and our Redeemer. Amen.

CHAIRMAN BOWMAN.—We will have the Addresses of Welcome. First, I will ask Dr. Raymond B. Allen, Executive Dean of the Chicago College, University of Illinois, and Dean of the College of Medicine, to speak.

DEAN ALLEN.—It is an honor to join my colleagues Drs. Miller and Irons in welcoming you to

Chicago and to the State of Illinois on the occasion of your 102nd Annual Meeting. I bring you the cordial greetings and best wishes of the University of Illinois which for many years has recognized the field of psychiatry as an important and rapidly expanding discipline of the medical sciences. This recognition embraces, of course, neurophysiology, neuropathology, psychology, and psychiatric aspects of social medicine. As your knowledge of men has grown and as your skill in the treatment and prevention of mental illness has improved, it is evident that psychiatry has moved abreast of the older clinical specialties in its contributions to the health and the general welfare of mankind. Indeed, it may soon pass them. Modern psychiatry uses all the tools of precision investigation, including chemistry, biophysics, electrophysiology, together with methods of psychology, psychosomatic medicine, and certain aspects of social medicine. By social medicine, I mean the interaction of the social environment with the personality and organism of the individual. These are the tools, or so it seems to me, by which we shall accelerate our advance toward full understanding of the whole life process. Psychiatry has learned much about the human mind and human personality through the use of words and other symbols, chiefly by subjective methods.

Now you are bringing the objective experimental methods of the natural, biological, and social sciences to bear on the most fundamental problems in all of medicine and of the life process itself. You are searching out the sources and the controls of the energy system of nervous tissue. In doing this you will learn some of nature's most tenaciously held biological secrets. I am confident that this broad approach will inevitably lead to a clearer understanding of the function of nervous tissue and, therefore, give information which will be of great value in the prevention and treatment of mental disease. This is what I would conceive to be your research mission in the second one hundred years of the existence of the Association.

Your educational mission, of course, is obvious, and you are already well along the road toward its fulfillment. It is to provide for the widely disseminated teaching of the principles and skills of psychiatry throughout all departments of the undergraduate medical school; this is in order to inculcate the idea that the human being in health and disease must be understood as a whole and not merely as a collection of organs, parts and systems. I understand that you are also taking

steps in your graduate training program to produce specialists who will conceive of themselves as something more than just psychiatrists serving individual patients. We need a new kind of clinician, a social clinician who recognizes that no person lives to himself alone, but that he functions in a social system which is continuously molding his actions and reactions and which he himself tries to mold to his desires. Justice Holmes once remarked, "Man, whether he realizes it or not, is always fighting for the kind of world he wants." This struggle for gratification of personal desires and ambitions, in the environment of the group and subject to its discipline, makes us what we are within the framework of our inherent capacity. In this struggle few achieve perfect balance and complete happiness. I take it that it is the mission of any physician, as well as the psychiatrist, to aid those who need help in adjusting themselves to the great complexities of life in this industrial age. Your mission in education will be incomplete until you have helped men in practice to understand the place of psychiatry in the doctor's medicine kit. You have a special responsibility toward general practitioners and family doctors in this regard. This will call for the kind of aggressive planning which the Association and the National Council on Mental Hygiene and other organizations have instituted in recent years. It should be emphasized that this program, while stimulated in large degree by the adjustment problems of veterans of World War II, must be equally concerned with "operational fatigue" among civilians. Mental casualties on the civilian front have been with us always. All the skills of the medical profession are needed to combat maladjustment and mental breakdown in every walk of American life. Without integrity of personality and mind in the individual, we cannot hope for integrity and unity as a nation and as members of one world.

Now may I give you a few questions which should concern every thinking American. The first is whether man has sufficient wisdom, humility, and social consciousness to use his newly-found material powers for the constructive purposes of all mankind. Free men have proved that democracy, and our republican system of self-government particularly, has the inherent strength to be victorious in a world at war; we have yet to prove that we can win a durable peace. Never before has the intellectual, spiritual and moral life of man faced a test of such a portent for good or evil. Medicine with its age-old concern for the sick, the poor as well as the rich, the weak as well as the strong, has been an influence for good surpassed only by the moral precepts of religion. The services of medicine, like those of religion, have been largely personal. There will always be need for personal services, but medicine of the future, if it is to progress as a social as well as a biological science, must broaden its outlook and adjust its educational program accordingly. Medicine is coming of age as a social science.

Thinking and planning for democracy must be

bold and dynamic, drawing not only upon the talents of individuals, but also upon the social discipline of the group. At times, unfortunately, our system falters. We have great difficulty in distributing evenly the goods and services, including medical services, that our expanding technology pours forth in ever greater abundance. Our social process lacks stability which, perhaps, is but a sign of growth and change. This should not be too alarming. But, when our system becomes so unstable that it upsets our relations with our neighbors and when we lack the self-discipline and social controls to resolve our differences rationally and peaceably, then just to this extent have we failed at one of our primary tasks.

College graduates generally fail to take an interest in legislation, state or federal, even when it intimately affects their own fields of business or professional activity. We have always maintained that training for leadership is a major function of education. If this is true, then we are failing in our purpose when education does not develop in the individual a social and political consciousness to the same degree that it trains him for professional and vocational proficiency. If this is true, may it not also be that here is a significant reason for disharmony between government, that is, social controls within the framework of law, and the citizen who still believes that "that government is best which governs least"? Is our educational system, at all levels, sufficiently conscious of its obligation to educate for responsible citizenship? This, I believe, is a question we must resolve if our Republic is to survive in the critical years through which we are passing.

But there is a larger question, one that concerns every American, whether he is a professional man or not. It is: What has happened to our greatest national asset, the native American spirit; the selfless, Christian spirit that founded this great nation, that unified and preserved it from internal division, that industrialized a continent and that, twice in this century, joined with and led the peace-loving peoples of the earth in conquering tyranny and preserving our right to live as free men? To live for what? For the good life for all men everywhere? Or for the giddy life of getting and spending in which human values are overwhelmed and smothered by the petty value of material things? If the latter is our answer to a starved and war-torn world, if we demand an island of selfish American plenty within a world of want, then we are a dying nation with no hope of realizing our true inheritance of greatness. We are left, it seems to me, with only one choice; we must elect to bring the machine under social control; we must decide that economics should be made to serve the good life for everyone rather than merely that of a favored few; we must recognize that it takes a man, not an adding machine, to understand a man.

Time is short and apparently getting rapidly shorter. We must join hands with enlightened men everywhere, in the church, in business, industry, and labor, in the professions and in

statecraft, to strive for the realization of our native American spirit and for greatness in the "brave new world" in which we live.

As a great profession we must meet our obligations to the society from which we derive our right to exist. Today we are meeting this obligation in one way by adjusting our educational programs to emphasize, in equal measure, the development of social and political consciousness and training for proficiency in professional and technical skills. As medicine assumes its full stature as a social science, we may confidently expect the physician of the future to take his accustomed seat in the councils of community and state as a responsible and constructive citizen. To him the people may rightly look for leadership.

Medicine, like the peace, is indivisible. Its only concern is to advance its understanding of man, in health and disease, wherever on the face of this tortured planet he happens to live and to bring him as much relief from pain and disease as the knowledge and skills of the physician make possible. I look to psychiatry to help lead medicine in the nation's quest for social synthesis and world unity. With your vital contributions to medical science and medical education the doctor of the future will become a social clinician and medicine will add to itself the useful attributes of a social science.

CHAIRMAN BOWMAN.—We will next hear from Dr. J. Roscoe Miller, Dean, Northwestern Medical School.

DEAN MILLER.—*Mr. President, Ladies and Gentlemen:* I want to reiterate what my colleague, Dean Allen, said, about welcoming you to Chicago. It is an extreme pleasure to have this body honor us with this, their 102nd meeting. I am sure everyone is aware of the importance of this gathering. The conflict just ended has focused, as never before, the attention of public and profession alike on the importance of psychiatry in the medical picture. Those not connected with psychiatry are apt to consider it a newcomer on the scene. Of course, nothing could be farther from the truth. It has an unrivaled tradition of antiquity. Even in the United States, no less a medical personage than Benjamin Rush served as midwife to the specialty. Illinois is proud of having played a significant part in development of psychiatry in this country. The first law establishing a juvenile court was enacted in Illinois in 1899. The Institute for Juvenile Research was established in 1909 and was among the first, if not the first such institution in this country. The Illinois Society for Mental Hygiene was organized in 1909 with Henry Favill as President. The State of Connecticut had the first Society in 1908 and Illinois and the National Committee followed by one year. In 1888, Hill called attention to the fact that the Illinois State Board of Health was the only organized body at-

tempting to introduce psychiatry into the medical curriculum.

Yet despite this long history, as recently as 1939 the Council on Medical Education and Hospitals of the American Medical Association stated that psychiatry had not yet found itself in the teaching program.

It is my humble opinion that psychiatry has suffered as the result of medical isolation. The concept of mental illness as part of the whole was thwarted by deflection of patients to institutions removed from medical centers. More often than not, tax-supported institutions for the mentally sick were built and located according to political pork barrels, rather than scientific dictates. The result has been that the teaching of psychiatry has suffered through the lack of clinical material, the patient has suffered because of separation from the best medical science has to offer, and research has been stultified. The importance of research in all branches of science, and particularly in medicine, has been emphasized during the war. It is to be hoped that psychiatry will reap its share of the well deserved harvest which is anticipated. There can be little but a political excuse for the establishment of an insane asylum far from the doctor, the laboratory, the library and, above all, the source of patients. One of the most hopeful developments in American Medicine to occur for a long time, is the program of the Veterans Administration. If they are successful in building their hospitals and out-patients near established medical centers, the results are inevitable. Improved care of the Veteran, training of medical personnel and promotion of research must follow. I express the fervent hope that psychiatry will be an integral part of this program. As one vitally interested in its development, I beseech this potent organization to lend its support and aid to those responsible for its attainment.

In closing, and without prompting by the Chamber of Commerce, may I express the hope that our salubrious climate, the environment of scientific medicine and medical education, plus mid-western good fellowship will add to your pleasure as well as serve as a stimulus during your weighty deliberations.

CHAIRMAN BOWMAN.—Thank you, Dr. Miller. We will next hear from Dr. Ernest E. Irons, President, Institute of Medicine, Chicago.

WELCOMING ADDRESS BY ERNEST E. IRONS, M. D.,
PRESIDENT INSTITUTE OF MEDICINE,
CHICAGO, ILL.

On the occasion of this meeting of the American Psychiatric Association early in its second century of existence with its 3,300 members, I have the honor on behalf of the Institute of Medicine of Chicago to welcome you. Here in Chicago in 1857 was chartered a medical school, which took the name of Rush Medical College, in memory and in honor of Benjamin Rush whose name has been revered by your Association as the patron of

American psychiatry. The first students entered Rush in 1843. In 1844 the forerunner of The American Psychiatric Association was organized, and in the same year the American Journal of Insanity began publication. Three years later in 1847 the American Medical Association was organized. We in Chicago are thus alive as are you to the accomplishments of organizations begun by men of foresight a century ago. In this period many men have contributed to the growth of psychiatry and in due course have passed on. Their accomplishments have been recorded in your important and attractive memorial volume of 1944.

I must pause to pay tribute to a member of the old Rush faculty, and a valued member of your association, Dr. Peter Bassoe whose passing has deprived you of a wise counsellor, and us of a beloved friend.

A multitude of psychic problems beset the patients who come to the internist for supposed physical ailments. They require the same careful exploration as do the more serious cases of psychic disturbances which come to the psychiatrist. Currently the relation of distress of psychic to distress of physical origin has been emphasized under the modern title of psychosomatic medicine. This emphasis is praiseworthy and desirable, but the procedure is not new. Wise physicians have employed this approach for centuries. Listen to the advice of Théophile Bonet, 17th century physician and author of the *Sepulchretum*, forerunner of Morgagni's *Seats and Causes of Disease*.

In the *Fractical Physician*, Bonet offers advice drawn from the experience of previous centuries, and from his own practice, as to the conduct and methods of a physician. After discussing the means of detection of simulation of disease and of malingering, he says:

"Many take wrong Advice of Physicians counterfeiting the Headache, Burning in the night, when their is no such thing. Some burn with Lust; Others with Anger; Secret Fear grieves some; A silent Care others: All which things are the fountains and causes of Diseases, unknown to a Physician unless they be told him—For the Physician will abstain from many things and prefer others when he finds an afflicted mind which he would not do, were he content only with what of the Disease he finds apparent."

In the war now concluded psychiatry has rendered services of inestimable value in the healing of the mental wounds of war in the Army, Navy, and Merchant Marine. Practically the entire membership of this association was engaged in one or another war activity, and in meeting the problems of civilians. And then there were not enough. Improved methods of combatting at an early stage the psychic effects of the tension of hardship and the shock of war, were devised by members of this association with resulting decrease in chronic and permanent disability.

Now with the coming of peace there are presented the problems of the development of humanitarian disciplines. These problems go so deep that as Dr. Stecher well points out, the survival

of our democracy is seriously imperiled. We have on the one hand to avoid the callousness of those who would continue here the law of the jungle, and on the other an emotional type of thinking in which the attempt to remedy the misfortunes of some, leads to generalizations destructive of the welfare of the majority.

Deep sympathy for the distress of that unfortunate who in one way or another has been temporarily deprived of his livelihood should not lead to the establishment of practices which tend to produce and accentuate economic delinquency. We have already more than enough people who do not want to work.

In forming our judgments of principles and plans for social betterment we are influenced too much by apparent immediate exigencies and seek what seems to be an easy way out, instead of being guided by a review of the events of the history of nations of the past. There we can find the same problems which we face today, and more important, can see how the solutions adopted then, affected those national welfares.

Nor do we need to go back beyond our own history, from the founding of this nation, in which we can review the same kinds of conflicts of interests, the same attempts to array class against class, the same utilization of just complaints to the purposes of chicanery and political advantage.

The fallacies in some of our modern repetitions of Roman, French and early American schemes, such as the creation of an economy of scarcity, the plowing under of cotton and food stuffs, the destruction of little pigs, the manipulation of prices to secure political preferment from one class to defeat another, are now clearly evident. Spending ourselves rich seems in a fair way to be discredited. All of these and similar attempts at economic control depend on some form of managed economy, which in the past has always developed dictatorships, then revolution, and ultimately has brought nations to ruin.

We have become more or less accustomed to the regulation of our economic lives in the successful prosecution of total war, which fortunately for us did not require the severe sacrifices of liberty demanded of some of our allies. In the transition period from total war to what we hope will be total peace, some care is necessary in the relaxations of previously necessary regulatory measures, but unless we wish to travel further down the road to total managed economy, we must stop tampering with the exercise of free enterprise. Within the year we have witnessed the delay in economic recovery, caused by the desire of little men in big jobs to prolong their brief period of authority, and by selfish leaders of deluded minority groups, who have been allowed to paralyze economic recovery, and to impose unrecoverable economic losses on their own constituents. A managed economy is incompatible with democracy.

At present the medical profession is confronted with an attack on its freedom of practice. It is proposed to establish a managed economy of medicine which would destroy the patient-physi-

cian relationship, the fundamental importance of which is nowhere more evident than in psychiatry. The psychiatrist is of necessity an individualist and his work cannot conform to the limitations of a panel. It is true that the work of the psychiatrist is carried on to a considerable extent in institutions, many of which are maintained by the state. The quality of service in the mental hospitals is conditioned largely by the degree of freedom from political interference. The entrance of political preference into a group of previously well managed hospitals is at once destructive of standards already attained and is a constant threat against the maintenance of institutional morale and competency of service. It is difficult enough to maintain such freedom of practice as we now have, with resultant varying degrees of excellence in our state hospitals. Under national centralization of medical control, even state mental hospitals would feel further the limitations of freedom of practice, as well as a deterioration in quality of younger men who would enter the institutional practice of psychiatry.

The regimentation of medical practice is but one more step in the attempt to change our government from one of free enterprise to one of a managed economy with government by blocs, and an eventual dictatorship.

If we prize our freedom and the opportunity for individual effort, and the chance to continue the advances in medicine which will add to the improvement of standards of human service instead of destroying them, we shall endeavor to maintain the freedom of medicine as free citizens in a democracy.

Again Mr. Chairman, may I welcome you to Chicago and wish you a pleasant stay and a profitable meeting.

CHAIRMAN BOWMAN.—Thank you, Dr. Irons.

I will now call upon Dr. Samuel W. Hamilton, President-elect, to give the response.

RESPONSE BY SAMUEL W. HAMILTON, M. D.,
PRESIDENT-ELECT

The American Psychiatric Association is happy to come back to Chicago for its 102nd annual meeting. Probably we would have profited by meeting here oftener. We seem to have come first in 1893, the year of the World's Fair, again in 1918, and again seven years ago. On that last occasion we remember gratefully how you enabled us to have a very satisfactory meeting.

There is much about psychiatric accomplishment in Illinois for which we are grateful. The State has always supplied men of weight and influence to the membership of this Association. To mention only a few: Dr. Andrew McFarlane, Superintendent at Jacksonville from 1854 to 1870 was very highly thought of by his colleagues. Richard Dewey, the first superintendent at Kankakee, was one of our leaders. Dr. Zeller, an outspoken and persistent advocate of some important things in the care of the mentally ill was a product of your state service. Dr. Wilgus at Elgin was a friend

of mine, a most competent clinician and executive. Dr. Singer at the time of his death was about to be President of both this Association and the American Neurological Association. To our deep sorrow the list of those who have gone on must now include Charles F. Read, for a long time your outstanding hospital head. Many other names of men who have devoted themselves wholeheartedly to the needs of the mentally ill of this state might be added before the category would be nearly exhausted.

We come, then, with pleasure because of agreeable relationships in the present, with reverence for our predecessors who served their fellowmen well. Now you tell us of your present activities, your needs and your ambitions for us. We appreciate your frankness in all this. The world is certainly in a period of trouble. Millions have been slaughtered and other millions will starve before stability is attained. In our own field, hospitals all over the country have been bereft of needed personnel and sometimes have been unable to get needed supplies. Standards of care have suffered. Unfortunately standards of care were already poor in too many places. Enterprising publicists have brought home some of these deficiencies in vivid form and with shattering effect. Now is the time when we must strenuously strive to repair the damages brought about by the competition of financial expansion, and must push ahead until we do for our patients all those things we know should be done and more than most of us have ever done before. We are grateful that Illinois is to be active in this program as in so many others.

Both inside and outside the hospitals we are all in debt to Illinois because your men have seized on one and another important practice, have developed and made it vivid and got us all to use it. The cottage system of hospital construction was developed at Kankakee. The use of the prolonged bath for lessening excitement was brought here from New York and expanded. Dr. Favill had the inspiration of making handwork available to many patients who could not be employed in hospital industry, out of which grew our occupational therapy. Physical education was drawn upon first, so far as I know, at the Chicago State Hospital for the benefit of many patients. The magnificent recreational programs of Jacksonville and Lincoln, perhaps due more to Dr. Drake and Dr. Waters than any other, were too tardily adopted in other states. Bringing psychiatry to the problems of children in a definite, organized fashion was done here by Healy and later by Adler and Schroeder. One of your hospital men, Dr. Clevenger, was the first to supply a laboratory to a young Swiss physician, Dr. Adolf Meyer, now the dean of American psychiatrists. These things we mention with gratitude.

This period of fiscal prosperity has taken away physicians who were doing out-patient work, and patients who do not need to be in a hospital but sorely needing help have not always been able to find it. Teaching of psychiatry in medical schools

has been done under a handicap. The hours have been too few and the pupils too many. These damages happily are being repaired faster than those in our hospitals. We hear that your teaching organizations are fast building up, and that your outpatient clinics and your private practices are expanding. In these fields, too, we must repair the damage done by the war period, and must go on to broader and better practice than ever before.

We thank Dr. Allen, Dr. Miller, and Dr. Irons for their cordial welcome, and the clergy who have asked the Almighty to sit in with us. Never was there a time when we more needed Superior wisdom than in this year 1946. We hope that many of our colleagues in other types of medical work will sit in our sessions and contribute from their experience and wisdom to our deliberations. Your agreeable sentiments, gentlemen, are deeply appreciated.

CHAIRMAN BOWMAN.—Thank you, Dr. Hamilton. I will now ask Bishop Randall to give the benediction.

THE RIGHT REV. EDWIN J. RANDALL.—Almighty God, Giver of all good things, grant us in our work to mankind that we may both receive and know the things which You want us to do, and grant us the grace and power to fulfill the same. In His name I give you that age-old benediction, The Lord bless you and keep you, the Lord make his face to shine upon you and be gracious unto you, the Lord lift his countenance unto you and give us peace both now and ever more. Amen.

CHAIRMAN BOWMAN.—We will have a short business session, before the scientific sessions.

We will now have the report of the Committee on Arrangements, Dr. Neymann.

DR. CLARENCE A. NEYMANN.—*Mr. President, members of the Association:* The Committee on Arrangements wishes to apologize to the Association, for everything will not be just as it should be. You must remember we have been in the throes of a railroad strike, and last Friday and Saturday, we were, "Off again, On again, Gone again, Finnegans" because we did not know how many of the members would be here. In the final analysis, some of our attempts to bring you fun and pleasure have been rather condensed.

Announcement of social affairs by Dr. Neymann.

CHAIRMAN BOWMAN.—Thank you, Dr. Neymann. I am sure that there are quite a few here who realize there was a railroad strike. I had several long distance calls from various members scattered over different parts of the country, who got part way here, and who wanted to be sure that the meeting was going on before they started to find ways of making the final lap. I am happy to say that most of those I have already seen in the audience.

As you know, this same railroad difficulty has imposed many difficulties on our scientific division of the program, because certain persons are unable

to get here, and it will force changes which may have to be made at the last minute, and without previous warning.

I will now call on Dr. Malamud to give the report of the Program Committee.

DR. WILLIAM MALAMUD.—*Dr. Bowen, Ladies and Gentlemen:* Dr. Bowman has already told you that we have had a great deal of anxiety about whether we can have the program as it has been arranged. I still do not know just how many changes will have to be made.

There is one important help I would like to get from you, those who have to read papers should meet me as soon as possible after this session.

CHAIRMAN BOWMAN.—Thank you, Dr. Malamud. I will now call upon the Secretary-Treasurer for his report.

DR. WINFRED OVERHOLSER.—*Mr. President, Fellow Members and Guests:* It has been two years since this Association has met, and consequently the figures cover different periods from what they normally would.

There have been several changes in committees since our last meeting, including the creation of several new committees, and you will find the revised list of the members of the various committees in our program.

At the present time, including the group of members and Fellows who were elected a year ago, and who presumably will be confirmed by your vote Wednesday morning, our membership is as follows: Honorary, 19; Corresponding, 16; life members, 98; Fellows, 910; Members, 2211; Associate members, 379, a grand total of 3633, or a gain of 521 over April 1, 1944, not including a list of several hundred which will be proposed for election Wednesday morning.

The membership directory was not issued during the past year. Addresses were changing very rapidly with the return of our members from the services. The printing situation was extremely difficult, and it would have been so late in coming out, and would have been so relatively useless on account of the changes in address, that it was thought better to wait and get it out early this fall, probably by September, so we hope we shall have a directory for you within a few months.

Our income during the year was \$30,582, and the expenditures \$27,076, leaving a surplus for the year of \$3456.

It may interest you to know that we have 5692 paid subscriptions to the JOURNAL—a very substantial number, I think you will agree, and it will also interest you to know that for almost the first time, the JOURNAL is actually making a slight profit instead of running at a loss.

The financial report will be given later on. It has not been gone over by the auditors of the Association.

There is one letter which I should like to read to the members, presenting one of the problems of the war. It was forwarded through the office of the President of the Philippines, and comes from

the Department of Agriculture and Commerce of the Commonwealth of the Philippines.

Letter read by Dr. Overholser.

On Wednesday morning, I shall report on the activities of the meetings of the Council which have been held up to that time during this meeting.

There will be a meeting of the Council in the Crystal Room on the floor below at 12 noon today. That will be a luncheon meeting.

I could not pass this opportunity without mentioning the extremely valuable and efficient service that has been rendered during the year by Mr. Austin Davies, Executive Assistant, and his assistants, Miss Rubenstein and Miss Borduk. It is due almost entirely to them that the affairs of the Association have rolled along with relatively little checking in the business office.

CHAIRMAN BOWMAN.—We come to the appointment of a committee on resolutions, and I will appoint on that committee Dr. John Whitehorn as Chairman, Dr. Glenn Myers and Dr. D. E. Cameron. We will ask that they meet and consider the preparation of their report at the end of the session.

We will now have the Memorial for the deceased members, and I will ask the Secretary to read the list, and ask that you stand in respect.

The list of deceased members was read by the Secretary, Dr. Overholser, and the assembly stood for a moment.

William A. Sim, Quincy, Ill., died Apr. 21, 1943.
Serge Androp, Talmage, Calif., died Nov. 8, 1943.
Gilbert V. Hamilton, Santa Barbara, Calif., died Dec. 16, 1943.

James L. McAuskan, N. Grafton, Mass., died Mar. 22, 1944.

Mark H. Wentworth, Concord, Mass., died May 15, 1944.

August E. Witzel, Newark, N. Y., died May 15, 1944.

George S. Adams, Yankton, S. D., died July 22, 1944.

Isaac J. Silverman, Washington, D. C., died Aug. 7, 1944.

Ned R. Smith, Tulsa, Okla., died Aug. 18, 1944.

Walter M. Kraus, New York, N. Y., died Aug. 17, 1944.

Henry M. Swift, Cape Cottage, Me., died Aug. 18, 1944.

James T. Arwine, Santa Rosa, Calif., died Aug. 24, 1944.

Samuel T. Armstrong, Katonah, N. Y., died Aug. 31, 1944.

Edward M. Steger, Dallas, Tex., died Sept. 1, 1944.

Wilbur M. Judd, Greystone Park, N. J., died Sept. 1, 1944.

Gustav Aschaffenburg, Baltimore, Md., died Sept. 2, 1944.

L. M. Rogers, Chillicothe, Ohio, died Sept. 7, 1944.

Edward Green, Harrisburg, Pa., died Sept. 30, 1944.

J. Moorhead Murdoch, Pittsburgh, Pa., died Oct. 10, 1944.

Harold E. Hoyt, Astoria, N. Y., died Oct. 12, 1944.

Frederick R. Sims, Forestdale, Mass., died Oct. 26, 1944.

William W. Wright, Utica, N. Y., died Oct. 28, 1944.

Graeme M. Hammond, New York, N. Y., died Oct. 30, 1944.

John McCampbell, Morganton, N. C., died Nov. 5, 1944.

William A. Bryan, Norwich, Conn., died Nov. 7, 1944.

H. Wilbur Smith, Worcester, Mass., died Nov. 25, 1944.

O. B. Darden, Richmond, Va., died Dec. 10, 1944.

* William H. Mathews, Rochester, N. Y., died Jan. 4, 1945.

William H. McCarty, Marion, Va., died Jan. 6, 1945.

Lloyd H. Ziegler, Wauwatosa, Wis., died Jan. 8, 1945.

George F. Roeling, New Orleans, La., died Jan. 12, 1945.

Byron M. Caples, Waukesha, Wis., died Jan. 18, 1945.

Bernard T. McGhie, Toronto, Canada, died Jan. 20, 1945.

Oscar H. Bleicher, Lawrence, Mass., died Jan. 23, 1945.

Henry C. Werner, Fond du Lac, Wis., died Feb. 7, 1945.

Merton O. Blakeslee, Lapeer, Wis., died Feb. 12, 1945.

Joseph Smith, Brooklyn, N. Y., died Feb. 26, 1945.

Henry I. Klopp, Allentown, Pa., died Mar. 7, 1945.

Rebekah Wright, Danvers, Mass., died Mar. 29, 1945.

Harry H. McClellan, Dayton, Ohio, died May 1, 1945.

Robert G. Stone, Atlanta, Ga., died May 4, 1945.

Arthur C. Delacroix, Basking Ridge, N. J., died May 7, 1945.

Walter C. Haviland, Mansfield Depot, Conn., died May 14, 1945.

Marvin A. McDowell, Logansport, Ind., died May 21, 1945.

George E. McPherson, Amherst, Mass., died June 16, 1945.

Beverly R. Tucker, Richmond, Va., died June 19, 1945.

Henry R. Craig, Eloise, Mich., died June 22, 1945.

Lewis A. Golden, New Orleans, La., died June 22, 1945.

William J. Hammond, Westwood, Mass., died July 4, 1945.

Alice E. Johnson, Philadelphia, Pa., died July 19, 1945.

* Killed in action.

- Fletcher Van Meter, Talmage, Calif., died Aug. 4, 1945.
 Glenn S. Weaver, Big Springs, Tex., died Sept. 5, 1945.
 W. W. Young, Atlanta, Ga., died Sept. 7, 1945.
 Elizabeth L. Martin, Blairstown, N. J., died Sept. 9, 1945.
 Smith Ely Jelliffe, New York, N. Y., died Sept. 25, 1945.
 H. H. Drysdale, Cleveland, Ohio, died Oct. 6, 1945.
 Hugh Carter Henry, Richmond, Va., died Oct. 14, 1945.
 Robert D. Gillespie, London, Eng., died Oct. 30, 1945.
 Harold D. Palmer, Philadelphia, Pa., died Nov. 20, 1945.
 Walton Tackett, E. Moline, Ill., died Dec. 14, 1945.
 Emit L. McCafferty, Mt. Vernon, Ala., died Jan. 14, 1946.
 Charles F. Read, Elgin, Ill., died Mar. 11, 1946.

CHAIRMAN BOWMAN.—This closes the business session. There will be an interval of five or ten minutes, at which time the section meeting will start. As soon as possible, we will carry out the program.

Meeting adjourned at 11 o'clock.

TUESDAY MORNING SESSION

MAY 28, 1946

The meeting was called to order by the President, Dr. Karl M. Bowman, at 9.30 a. m.

DR. BOWMAN.—The first order of business is the report of the Nominating Committee. Dr. Ruggles.

DR. RUGGLES.—The Nominating Committee presents the following report, as printed in the JOURNAL for January, 1945.

President: Dr. Samuel W. Hamilton.

President-elect: Dr. Winfred Overholser.

Secretary-treasurer: Dr. Leo H. Bartemeier.

Councillors for three years: Dr. Karl M. Bowman, Dr. Frederick H. Allen, Dr. Harry C. Solomon, Dr. A. E. Bennett.

Auditor for three years: Dr. George H. Preston.

Respectfully submitted,

R. E. BUSHONG,

KARL A. MENNINGER,

THEODORE A. WATTERS,

GREGORY ZILBOORG,

ARTHUR H. RUGGLES, *Chairman*.

DR. BOWMAN.—You have heard the report. Are there further nominations?

DR. M. R. KAUFMAN.—I wish to make another nomination for the Council. I am certain that many of us have felt that perhaps we were guilty of not being very active in the business administration of the Association, and this nomination or series of

nominations that will be made has nothing whatsoever to do with the individuals who have been nominated. Some of them are my best friends, and I would hate to see them elected or hope they will not be. Now that I have made the situation moderately clear, I should like to make a nomination for the Council of a gentleman who is well known to all of you, both civilian and military—I nominate General William C. Menninger.

DR. BOWMAN.—Are there other nominations?

DR. MARION KENWORTHY.—I nominate Dr. T. A. C. Rennie for Councilor.

DR. O. SPURGEON ENGLISH.—I nominate Dr. Kenneth Appel for Councilor.

DR. BOWMAN.—Are there further nominations? I hear none, and declare the nominations closed. The Chair will entertain a motion to adopt the report of the Nominating Committee so far as it concerns those names over which there is no contest.

So moved by Dr. Kaufman, seconded by Dr. J. D. Campbell.

DR. HAMILTON.—The retiring President becomes automatically a member of the Council; his name is not in contest.

DR. BOWMAN.—My election seems to be assured. Those in favor will please say aye, those opposed no. The ayes have it, and I declare Drs. Hamilton, Overholser, Bartemeier, Bowman and Preston elected as nominated.

We now proceed to vote for three Councilors. I will call your attention to the fact that only Fellows and Members are entitled to vote, in accordance with Article Five of the Constitution. Those whose election as Member is pending are not entitled to vote, as we have not formally voted on their names yet. We shall, therefore, use the last official printed list of Fellows and Members for the guidance of the tellers. I will ask the following to serve as tellers: Drs. George Elliott, E. A. Strecker, S. B. Wortis, John Whitehorn. The tellers will pass out blank papers, and I will ask that you vote for any three of the six individuals nominated for Councilor, coming forward to deposit your ballot. I will rule that the three individuals receiving the highest vote will be declared elected. The Nominating Committee has nominated Drs. Allen, Bennett and Solomon; from the floor, Drs. K. Appel, W. C. Menninger and Rennie have been nominated.

The balloting then proceeded.

DR. BOWMAN.—The balloting is now closed, and the tellers will count the ballots. Dr. Overholser has one or two announcements to make.

DR. OVERHOLSER.—*Ladies and Gentlemen*, may I call your attention to the fact that the Councilors enter upon their duties immediately after their election. The President, President-elect, Secretary-treasurer enter upon theirs at the close of the Annual Meeting. Council will meet at 5 o'clock

today in the Crystal Room on the floor below. Dr. Ackerly, Chairman of the Membership Committee has an amendment to the Constitution for your information. It will be posted in writing at the Registration Desk, and will be published in the JOURNAL at least 60 days before the next Annual Meeting. This is the proposed change in regard to members: Article 3, Section 5—"Members hereafter shall be chosen from physicians who have specialized in the practice of psychiatry for at least 3 years and have fulfilled the requirements for Associate Membership. Members shall be chosen to Fellowship as it becomes apparent they deserve this recognition." Section 6 to read as follows: "Associate Physicians shall be physicians who have at least one year's practice in a mental hospital or its equivalent."

DR. BOWMAN.—As soon as the vote is announced, the section will start in this hall. Also, may I remind the newly elected members of Council that they are to appear in the next Council meeting and that they take office at that time. The tellers inform me that 192 votes were cast, and that a majority were cast for the following: Drs. Appel, Menninger and Rennie. I therefore declare them elected as Councilors for a term of three years.

WEDNESDAY MORNING SESSION

MAY 29, 1946

The One Hundred and Second Annual Meeting of The American Psychiatric Association convened at nine forty-five o'clock in the Grand Ballroom of the Palmer House, Chicago, Illinois. Karl M. Bowman, M. D., President, presiding.

PRESIDENT BOWMAN.—The first item of business is the election of members. You will all find a mimeographed sheet before you which has on it the list of members. This list was approved by the Council last night. There should also be a vote of approval for the list of names which was published in the JOURNAL and which the members were all asked to confirm. You will remember that a year ago, we were unable to have a meeting. The Membership Committee reported a list of new members. The only way that we could deal with this situation was by publishing the list and asking if there were any objections to these members and asking the members to write us if they had such objection. There has been no objection to any member on that list. We notified everyone on the list that they were tentatively admitted to the Association and we put them on the subscription list for the JOURNAL and we billed them for the regular dues, so that their membership would be retroactive to a year ago.

The Council, also at its meeting last night, approved two names which are not on the list, Dr. Mogens Elberman of Copenhagen as a corresponding member and Surgeon-General Thomas Parran as an Honorary member. Does anyone wish to make a motion with regard to the list and the names that I have mentioned.

The motion was made and seconded to approve the list of members with the two additional names.

ASSOCIATE MEMBERSHIP, MAY 1946

- Abrahams, Joseph, 2810 Foster Ave., Brooklyn, N. Y.
- Bassan, Morton E., Winter Gen. Hosp., Topeka, Kan.
- Bellak, Leopold, St. Elizabeths Hospital, Washington, D. C.
- Berger, Irving L., Henry Phipps Clinic, Baltimore, Md.
- Bill, Robert O., 1938 N. Talbot A-e., Indianapolis, Ind.
- Blaustein, Milton J., 1915 78th St., Brooklyn, N. Y.
- Bleiweiss, Irwin M., Capt., M.C., 100 Bennett Ave., New York, N. Y.
- Boyd, Clarence E., Capt., M.C., Box 8 Regional Hospital, Ft. Knox, Ky.
- Brunner, Richard A., Butler Hosp., Providence, R. I.
- Carone, Pasquale A., 538 Lafayette Ave., Brooklyn, N. Y.
- Church, Athol C., 2 Surrey Place, Toronto, Ont., Canada.
- Coates, Thomas F., Jr., 932 Park Ave., Richmond, Va.
- Coltharp, Ralph W., Lt., M.C., U. S. P. H. S. Hospital, Fort Worth, Tex.
- Coodley, Alfred E., Capt., M.C., 3369 W. 8th St., Los Angeles, Calif.
- Dorr, Thomas O., Winter Gen. Hosp., Topeka, Kan.
- Doubrava, Joseph F., Cleveland State Hospital, Cleveland, Ohio.
- Dribben, Irving S., Capt., M.C., Regional Hosp. No. 2, Ft. Bragg, N. C.
- Eastman, Charles W., Maj., M.C., 15 Millett St., Livermore Falls, Maine.
- Feinberg, Philip, Winter Gen. Hosp., Topeka, Kan.
- Frank, Frederick W., 3340 Clay St., San Francisco, Cal.
- Frankel, Kalman, Capt., M.C., Bushnell General Hospital, Brigham City, Utah.
- Friedlander, Joseph W., 3269 W. Maypole Ave., Chicago, Ill.
- Galvin, James A. V., 5 King St., Waterford, N. Y.
- Garber, Miles D., Jr., Winter Gen. Hosp., Topeka, Kan.
- Garvin, William J., 1st Lt., M.C., Moore General Hospital, Swannanoa, N. C.
- Gerchick, Elias H., 225 W. 86th St., New York, N. Y.
- Gilbert, Freeman J., Capt., M.C., N. D. Baker General Hospital, Martinsburg, W. Va.
- Goforth, Eugene G., 905 S. Main St., Bloomington, Ill.
- Goodman, Nelson, Regional Hospital, Ft. Warren, Wyo.
- Gosliner, Bertram J., Bellevue Hospital, New York, N. Y.

- Graves, Max D., State Hospital, Cherokee, Iowa.
 Hamilton, James A., Capt., M.C., Regional Hospital, Ft. Belvoir, Va.
 Hammerman, Steven, Capt., M.C., 251 S. 46th St., Philadelphia, Pa.
 Harper, Thomas S., U. S. Naval Hospital, Norman, Okla.
 Headlee, Charles R., Regional Station Hospital, Ft. Belvoir, Va.
 Holt, Herbert, 403 West 46th St., New York, N. Y.
 Horrocks, Jack B., Separation Center 49, Camp Grant, Ill.
 Huvelle, Camille H., 1st Lt., M.C., Percy Jones Gen. Hospital, Battle Creek, Mich.
 Joseph, Edward D., Veterans Admin. Hospital, Bedford, Mass.
 Joseph, Harry, 179 81st St., Brooklyn, N. Y.
 Joseph, Monte L., Ontario Hospital, Whitby, Ont., Canada.
 Kartus, Irving, 2045 White St., Alexandria, La.
 Kennison, Warren S., 4214 King St., Denver, Colo.
 Kenyon, Jack M., Toronto Psychiatric Hospital, Toronto, Ont., Canada.
 Kerman, Willard Z., Percy Jones Hospital Center, Camp Custer, Mich.
 Kessler, Franklin L., 1101 Main St., Peekskill, N. Y.
 Kowert, Edward H., Capt., M.C., Bushnell General Hospital, Brigham, Utah.
 Lawrence, Homer E., Capt., M.C., Mason General Hospital, Brentwood, L. I., N. Y.
 Leander, Richard B., U.S.N., U. S. Public Health Service, Ft. Worth, Tex.
 Lerner, Samuel H., Fitzsimmons General Hospital, Denver, Colo.
 Leuzzi, Anthony P., Capt., M.C., 434 Park Hill Ave., Yonkers, N. Y.
 Levine, Lena, 15 West 11th St., New York, N. Y.
 Little, Paul F., 5674 York Blvd., Los Angeles, Calif.
 Ludin, Albert P., 1st Lt., M.C., Veterans Admin. Hospital, Minneapolis, Minn.
 Maker, Louis E., Topeka State Hospital, Topeka, Kan.
 Mancusi-Ungaro, Harold R., Capt., M.C., 25 Oakland Terrace, Newark, N. J.
 Marcus, Irwin M., Capt., M.C., Beaumont General Hospital, El Paso, Tex.
 Mayer, Stephan K., Veterans Admin. Hospital, Northampton, Mass.
 McDevitt, John B., Capt., M.C., Station Hospital, Ft. Leonard Wood, Mo.
 Mercurie, Pasqual J., 117 Avenue U, Brooklyn, N. Y.
 Merker, Frank F., 4207 Smithdeal Ave., Richmond, Va.
 Mihelich, Lewis, Naval Air Station, St. Louis, Mo.
 Moses, Edward, 632 Main St., Malden, Mass.
 Murphy, Thomas W., U. S. Naval Hospital, Portsmouth, Va.
 Need, Louis T., U. S. Naval Hospital, Newport, R. I.
 O'Brien, William R., Fitzsimmons General Hospital, Denver, Colo.
 O'Donnell, John W., U. S. P. H. S. Hospital, Ft. Worth, Tex.
 Oppenheimer, Hans, 245 Fort Washington Ave., New York, N. Y.
 Palmer, Harris H., 1st Lt., M.C., Brooke General Hospital, Ft. Sam Houston, Tex.
 Pestillo, Mario P., Syracuse Memorial Hospital, Syracuse, N. Y.
 Pleiss, Philip H., 1st Lt., M.C., Camp Upton, L. I., N. Y.
 Pinsky, Abe, 883 Park Place, Brooklyn, N. Y.
 Poniatowski, Jerome F., 3052 Cheltenham Place, Chicago 49, Ill.
 Prugh, Dane G., Capt., M. C., ASF Convalescent Hospital, Camp Upton, N. Y.
 Quinn, Philip, 1st Lt., M.C., 310th General Hospital, Camp Blanding, Fla.
 Raisbeck, Alden, 111 Park Ave., New York, N. Y.
 Rasor, Robert W., National Training School for Boys, Washington 18, D. C.
 Renneker, Richard E., University of Chicago Clinics, Chicago, Ill.
 Robinson, Joseph, 1st Lt., M.C., Wakeman General Hospital, Camp Atterbury, Ind.
 Rosen, John R., 875 Fifth Ave., New York, N. Y.
 Sarnoff, Irving, 17 State St., Ossining, N. Y.
 Schneer, Henry I., Capt., M. C., Regional Hospital, Camp Polk, La.
 Schwartz, Abraham, 1st Lt., M.C., c/o Mrs. Constantini, 140 Riverside Dr., New York, N. Y.
 Shiell, Jerome A., Bellevue Psychiatric Hospital, New York 16, N. Y.
 Shurley, Jay T., 111 North 49th St., Philadelphia, Pa.
 Skolnick, Alec, McCloskey General Hospital, Temple, Tex.
 Smith, Howard B., 6637 Blakemore St., Philadelphia, Pa.
 Vetter, John J., 341 East 34th St., New York, N. Y.
 Wagenheim, Harry H., 1401 N. Spring St., Pensacola, Fla.
 Wermuth, William C., 111 North 49th St., Philadelphia, Pa.
 Wessel, Morris A., Capt., M.C., 722 Williams St., New London, Conn.
 Wilson, Earle E., Capt., M.C., 814 S. Maple Ave., Oak Park, Ill.

(92)

REINSTATEMENT AS AN ASSOCIATE MEMBER, MAY 1946

- Caprio, Frank S., Columbia Medical Bldg., Washington, D. C.
 Hill, Owen L., 915 South Cincinnati, Tulsa, Okla.
 Woodruff, Paden E., Veterans Admin. Hospital, Marion, Ind.

(3)

MEMBERSHIP, MAY 1946

- Abbott, John A., 29 Commonwealth Ave., Boston, Mass.
 Adamson, Gilbert L., The Western Trust Co., Winnipeg, Canada.
 Aldendorff, Herbert, 320 West End Ave., New York 23, N. Y.

- Allan, Blandford M. E., 48 Rowanwood Ave., Toronto 5, Ont., Canada.
- Anderson, Samuel E., Milledgeville State Hospital, Milledgeville, Ga.
- Argent, Albert H., Veterans Admin. Facility, Marion, Ind.
- Aronson, Abraham, 3341 W. Douglas Blvd., Chicago 2, Ill.
- Ascher, Abraham H., 125 Lenox Road, Brooklyn, N. Y.
- Ball, Erna D., 157 West 79th St., New York, N. Y.
- Beck, Charles, 2065 Grand Concourse, Bronx, N. Y.
- Bell, John P., 1814 Hopper Court, Hopkinsville, Ky.
- Benbow, John T., Florida State Hospital, Chattahoochee, Fla.
- Bennett, Robert E., New Jersey State Hospital, Trenton, N. J.
- Beshara, Edmund, Massillon State Hospital, Massillon, Ohio.
- Biancarelli, Edward J., 405½ Third Ave., Jessup, Pa.
- Binder, Morris, V. A. H., Roanoke, Va.
- Bird, Brian, 111 St. George St., Toronto, Ont., Canada.
- Blair, James P., Jr., Psychiatric Hosp., Galveston, Tex.
- Blass, Gustaf, Stamford Hall, Stamford, Conn.
- Bleckwenn, William J., Sr., 3441 Crestwood Dr., Madison, Wisc.
- Bogner, Inge A., 27 West 86th St., New York, N. Y.
- Bourkard, Ernest R., Institute of Living, Hartford, Conn.
- Bowser, Lawrence P., Walter E. Fernald State School, Waverly, Mass.
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 (299)

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(6)

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(49)

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(50)

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(2)

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HONORARY MEMBER

- Parran, Thomas, Surg. Gen., USPHS, Washington 25, D. C.

PRESIDENT BOWMAN.—It has been moved and seconded. Is there any discussion? If not, all those in favor of accepting the names on the published list in the JOURNAL and the two names I have read make known by saying "Aye"; opposed "No." Carried. These members are all elected.

Next in the order of business is the report of the Council. Dr. Overholser, Secretary.

DR. OVERHOLSER.—*Mr. President and Members and Guests:* I have a few announcements to make as well. The film, "Let There Be Light," which is a production of the Army Neuro-Psychiatric Division will be shown on Thursday, tomorrow at two o'clock in the theater in Exhibition Hall.

The National Association of Private Psychiatric Hospitals will meet in Room 963 today.

Up to last night we had a registration of 1171 members, 798 non-members, a total of 1969, which

some of us are inclined to think is remarkably good considering the disordered state of transportation.

We have among our corresponding members, Dr. Gonzalo Lafora, formerly of Madrid and more recently of Mexico City. We have Dr. Samuel Ramirez Moreno. We have Dr. Flores of Mexico City and we have our newly elected member. Dr. Mogens Ellermann of Copenhagen. We have from Barcelona, Spain, Dr. Antonio Subirona. From Paris, France, we have Drs. Fouquet and Pelage of the Department of Hospitals of the French Republic.

During the present sessions, the Council has held three meetings, totalling eleven and one-half hours. The Council has heard reports of numerous committees and has attempted at least to take appropriate action on their recommendations. They have also transacted other business which is now reported for the consideration of the Association. Reports of the committees will be printed in the September issue of the JOURNAL. Meetings were attended by a quorum of Councillors and also by representatives of the various affiliated societies.

The affiliated societies, by vote of the Council now for the past two years at least, have been requested to send representatives to the meetings of the Council. They have the privilege of the floor and have all the privileges, indeed, except that of vote. There are also in attendance various chairmen of the committees and various past Presidents and the President as well.

The Council first of all voted to recommend that the 1947 meeting be held in New York City from May 19 to 23.

At the request of the Special Committee on Psychiatry in the Armed Forces, that committee was discharged with thanks and it was voted to establish in its place really, both a Section on Military Psychiatry and a standing Committee on Military Psychiatry.

At the request of the Royal Medico-Psychological Association of Great Britain, it was voted to designate Dr. C. C. Burlingame as delegate to the annual meeting held in Edinburgh in July, 1946, without expense to the Association.

The Council voted to express its sense of gratitude to Dr. Clarence Neymann and his Committee on Arrangements, including the ladies of that Committee on Arrangements, and to the Illinois Psychiatric Society and the Chicago Neurological Society for their hospitality during the meeting.

It was voted that the Council favors establishing the JOURNAL on a monthly basis as soon as that becomes feasible. There may be some delays both clerical and due to the paper shortage.

It was voted to authorize the Committee on Psychiatric Nursing to resume their requirements expanded during the war of three months for affiliation instead of two months in psychiatry.

The report was received from Dr. Whitehorn as a representative of The American Psychiatric Association on the American Board of Psychiatry and Neurology, that new officers have been elected and

that certain changes in policy have been laid down. Perhaps I may be pardoned, Mr. President, if I read briefly from one or two of the changes which may be of interest to the membership.

First of all, there will be no certification on record after January 1, 1947. All certifications after that time will be by examination. Candidates seeking certification in both neurology and psychiatry, or supplementary certification in one after being certified in the other, must submit evidence satisfactory to the Board of an additional two years of full time basic training in the supplementary specialty.

There is one section which would be of interest to those training in the armed forces. Credit will be granted for one year of basic training in the psychiatric or neurological service of the Army, Navy or Public Health Service and Veterans Administration. Further credit for basic training will be granted only if the training has been received in an institution recognized by the Council on Medical Education of the American Medical Association and approved by the Board.

Time beyond one year spent in an approved psychiatric or neurological department of the above government agencies may be credited to experience providing the candidate has been regularly assigned to a service in neurology or psychiatry.

The report of the Placement Service was considered of such interest to the membership that some time ago the Council requested that it be prepared in time so that it might be mimeographed for distribution. You will find copies at your seats.

The report of the Psychiatric Foundation was given to the Council and that will be announced in detail later on.

Four societies were recognized as affiliates, as follows: The Neuro-Psychiatric Society of North Carolina, The Neuro-Psychiatric Society of Virginia, The Colorado Neuro-Psychiatric Society, and The New Jersey Neuro-Psychiatric Society.

It was voted to accept the report of the Council on Standards and Policies, and I should like to read a brief extract from their recommendations.

"It is the opinion of this committee that the Association should take immediate and vigorous action as follows:

"(1) To set forth the actual status of mental hospital care of patients throughout the country.

"(2) To state the reasons why deficiencies have existed and have been aggravated by war conditions.

"The committee urges the Council machinery as funds become available to activate inspection and rating of all mental hospitals and bring to the attention of the state authorities deficiencies requiring correction."

"The committee is also of the opinion that by supporting wholeheartedly the Psychiatric Foundation, the aims of psychiatry as outlined will be advanced by the collaboration of lay and professional groups.

"Finally, the committee recommends that the Association urge general medical and surgical hos-

pitals to include in their plans for development a psychiatric in-patient service. Professional publications, such as "The Modern Hospital" should be requested to carry editorials on this matter.

"It is further resolved that the Council of The American Psychiatric Association take the initiative in gaining the cooperation of the American Medical Association and the American Hospital Association in joint support of this recommendation."

It was voted to nominate Dr. Kenneth Appel as a member of the American Board on behalf of The American Psychiatric Association, succeeding Dr. Karl Bowman, whose term has expired. This is merely a nomination to the Board. The Board technically elects own members.

It was voted to authorize additional clerical help and additional office space for the New York office on account of the increasing amount of work that has to be done there.

It was voted to recommend the list of members as mimeographed and add the names of Dr. Thomas Parran as Honorary and Dr. Mogens Ellermann of Copenhagen as corresponding member. You have already acted on that recommendation.

It was voted to authorize the Committee on Public Education to distribute psychiatric films prepared by the army as requested by the Surgeon General of the Army. "Let There Be Light," which I announced will be shown at two o'clock tomorrow, is one of those films.

It was voted to confirm the appointment of Dr. William H. Dunn as a member of the Committee on Membership. That appointment is the one appointment to any committee which has to be confirmed by the Council.

It was voted to elect Drs. Strecker and Rennie as members of the Executive Committee.

It was voted to establish a Committee on Preventive Psychiatry and also to establish a special committee to prepare another biographical volume when business conditions merit.

I announced on Monday that I would have the report of the Certified Public Accountant relative to the funds of the Association. That report is here and is accessible for examination by any member of the Association who desires to see it. Briefly, in the general account the receipts were \$28,315.97 and the expenditures were \$534.42 more than that. However, it should be borne in mind that among those expenditures is one item of \$3,225.00 which was the amount turned over during the period audited to the National Committee for the Joint Placement Service. That was an extraordinary expenditure. On the JOURNAL account, the receipts were \$20,887.85 with an excess of receipts over expenditures of \$1,899.99. Somebody should have chipped in a penny! There is a total excess of income for the year, counting both accounts together, therefore of \$1,365.47 which is not a large surplus. However, the total surplus account, counting all securities, savings account and checking accounts, is \$45,420.76.

STATEMENT OF INCOME AND EXPENSES FOR PERIOD APRIL 1, 1945, TO MARCH 31, 1946

Income

Income—General Account:

Membership Dues	
1944-1945	\$1,258.50
1945-1946	24,985.69
1946-1947	220.00
1947-1948	1.00
Fellowship Certificates	75.43
Membership Certificates ..	6.47
Biographical Directory ...	24.75
Rent—Committee Psychiatric Nursing	700.00
Foundation	162.00
Interest—Savings Account and Canadian Bonds....	791.89
Insurance Refunds	90.24
Total Income—General Account	\$28,315.97

Income—AMERICAN JOURNAL OF PSYCHIATRY:

Subscriptions	\$12,455.13
Advertising	7,898.70
Back Numbers	506.77
Miscellaneous	27.25

Total Income—JOURNAL Account 20,887.85

Total Income \$49,203.82

Expenses

Expenses—General Account:

Salary—Executive Assistant	\$5,824.98
Clerical Salaries	4,931.40
Printing	648.68
Committee Expenses (Schedule Attached) ...	7,568.61
Committee on Mental Hygiene	3,225.00
Annual Meeting—Subsidy	1,200.00
Telephone and Telegrams..	56.47
Electricity	81.24
Rent	1,717.20
Postage	667.45
Insurance and Annuities...	556.89
Check Tax	53.92
Travelling Expenses—Austin M. Davies.....	188.96
Foundation Expense	84.34
Office Supplies	99.40
Old Age Benefit Tax....	77.03
Income Tax—Withholding	73.15
Auditing	110.00
Gift	250.00
Blanket Bond	182.25
Miscellaneous	1,250.42

Total Expenses—General Account \$28,850.39

<i>Expenses—AMERICAN JOURNAL OF PSYCHIATRY:</i>		
Printing JOURNAL (Vol. 101, Nos. 5-6; Vol. 102, Nos. 1-2-3-4)	\$14,628.69	
Other Printing	27.69	
Editorial Assistance (Vol. 101, Nos. 4-5-6; Vol. 102, Nos. 1-2-3-4)	1,174.90	
Rent	200.00	
Medical Publication Bureau Advertising Commission . \$2,104.54		
Printing, Promotional and Mailing	87.56	2,192.10
Telephone	310.97	
Postage	327.36	
Check Tax	5.90	
Miscellaneous (Including mailing Back Numbers.. \$100.59		120.35
Total Expenses—JOURNAL Account		\$18,987.96
Total Expenses		\$47,838.35
Excess of Income Transferred to Surplus		\$1,365.47

SCHEDULE OF CASH AND RESOURCES

MARCH 31, 1946

	Book No.	Balance
Chase National Bank.....		\$2,200.12
Union Dime Savings Bank....	1,115,778	4,462.54
Emigrant Industrial Savings Bank	137,048	4,478.56
Bowery Savings Bank.....	258,266	4,866.41
Manhattan Savings Bank....	3,557	4,851.90
Total Cash Balances.....		\$20,859.53

Net Resources

American Psychiatric Association (as above)	\$20,859.53
U. S. Government Defense Bonds.....	15,000.00
Canadian Government Bonds.....	3,057.00
AMERICAN JOURNAL OF PSYCHIATRY—Chase National Bank.....	6,472.88
Meeting Account—As per statement as per July 15, 1944.....	31.35
Net Resources Available.....	\$45,420.76

Reconciliation of Surplus Account

Surplus, April 1, 1945.....	\$44,055.29
Excess of Income for Year Ended March 31, 1946.....	1,365.47
Surplus April 1, 1946.....	\$45,420.76

May I request at this time that the chairmen or the secretaries of the Sections, the various Sections, there now being five: Psychoanalysis, Convulsive Disorders, Psychopathology of Childhood, Forensic Psychiatry, and Military Psychiatry, should turn in to me today the names of the officers elected for the coming year in order that I may make proper announcement of them tomorrow.

I move you, sir, the approval of this report of the Council.

PRESIDENT BOWMAN.—You have heard the motion. Is there a second?

The motion was severally seconded.

PRESIDENT BOWMAN.—Is there any discussion? If not, those in favor make known by saying "Aye"; opposed "No." It is carried.

It will be of interest to the members, I am sure, to hear of the various decorations and citations received by members of this Association. We have tried to acquire a complete list, but I am doubtful whether we have such. I know as regards the Selective Service Medal we do not have. We merely have the list of names of those given the national award in Washington, D. C., and there are a great many I am quite certain which were given regionally of which we have no record.

I will ask that you all stand for a moment for our one member who was killed in action, Dr. William Matthews.

The assembly observed a moment of silence.

PRESIDENT BOWMAN.—We will have the presentation of Fellowship Certificates.

DR. OVERHOLSER.—The President has asked me to request those whose names I call to come forward.

The presentation of the Fellowship Certificates was made by President Bowman.

PRESIDENT BOWMAN.—We will now take a two or three minute recess and then we will start the scientific program of the morning.

The meeting recessed for ten minutes.

PRESIDENT BOWMAN.—Will you please come to order again. There will be a change in the order of the morning program. Professor Shapley has apparently been detained and we hope he will be here in time to speak this morning, but since he has not yet arrived, we will ask the second speaker to speak first. We will now listen to the "Place of Psychiatry in the Veterans' Administration Medical Program." Major General Paul R. Hawley, Chief Medical Director of the Veterans Administration, Washington, D. C.

GENERAL HAWLEY.—Dr. Bowman, Fellows and Members of The American Psychiatric Association: This reversal of order of papers places me in an embarrassing position. I had thought that we would all have been anesthetized by the mental

gymnastics of an astronomer to the point where I could present my paper in a quiet way and not be embarrassed, but I find instead of following the mental acrobat, I have to precede him.

I should like to give you a general summary, a sort of aerial photograph of the neuro-psychiatric problems facing the Veterans Administration.

Major General Hawley read his prepared manuscript which was turned over to the Association.

PRESIDENT BOWMAN.—Thank you, General Hawley, for this very inspiring address regarding the program of the Veterans Administration. Those of us who have had to do with this know the tremendous obstacles against which General Hawley has had to contend and the tremendous progress that is being made, and we know that psychiatry is getting the recognition which we feel it deserves and we all owe General Hawley a great debt of gratitude for the work he is doing.

Our second speaker this morning is Professor Harlow Shapley, Director of the Harvard College Observatory, who will speak on the subject, "Planets are Predictable."

The address by Dr. Shapley, director of the Harvard Observatory, on "Planets are Predictable" covered various astronomical subjects, including the effects of moonlight, lunar gravitation, and other lunar influences on man and other biological phenomena on the surface of the earth.

PRESIDENT BOWMAN.—There is no need of my telling you, Professor Shapley, how much the audience has enjoyed your talk and we are greatly obliged to you for coming here.

This closes the morning session and I will ask that you reassemble promptly at two o'clock as we have a long program this afternoon. We must close at five in order that the banquet may start at its appropriate time.

The meeting recessed for luncheon at twelve o'clock.

WEDNESDAY AFTERNOON SESSION

MAY 29, 1946

The meeting reconvened in the Grand Ballroom of the Palmer House at two o'clock. President-Elect S. W. Hamilton, presiding.

DR. HAMILTON.—The meeting will come to order. Ladies and Gentlemen, Dr. Karl M. Bowman, President of The American Psychiatric Association.

President Karl Bowman presented his prepared manuscript. (See page 1, July 1946.)

DR. HAMILTON.—Many things might be said aside from the applause to express the gratitude of this Association. It is, however, our custom to take quietly the address of the President and think it over and not reply to it at the time. I do take the liberty of saying to President Bowman that as I watched the intent character of the reception of this audience, I can see that he was stating things in a way that brought conviction to him and I think more than that, brought into words the opinions that many of us have not yet formulated.

This portion of the session is now ended and the President will resume the Chair.

President Bowman resumed the Chair.

PRESIDENT BOWMAN.—We will now pass over to the forum which is open for members only. So that for purposes of free discussion, in order that we can criticize back and forth freely and without restraint without fear of its being misquoted or reworded and given out and appearing as evidence of serious dissension, rather than as honest and a very worthwhile effort on the part of all of us to improve conditions in our Association, we feel that this session should be limited only to the members of our organization. We will therefore wait a minute or two until the hall is cleared and we will start the next session.

The meeting continued with a Forum with Dr. Karl A. Menninger as Chairman.

DR. MENNINGER.—You have all received in the mail the report of this committee and you know the history of this committee. Council felt that certain changes might be made and appointed a committee to do this. Your committee has worked pretty hard on it and spent a good deal of your money and incidentally a good many hundreds of dollars of their own money, every one of them. It's been a hard job.

We have attempted to get information from members of the Association. We feel that we weren't able to learn just how most of the members of the Association feel because most of them didn't answer the letter.

The committee made several suggestions that were considered by the Council and some of these were felt to be impractical or at least not possible, and it wasn't wise to try them out until the members of the Association were better informed and until the members of the committee were better informed as to the wishes of the members of the Association.

Some of the suggestions and some of the comments we got are included in the booklet which you have seen. On the next to the last page of that report we said that we recommend that the next convention of this Association be devoted to a serious, down-to-earth discussion of the practical problems of our members, those problems that our members meet in the daily work of their practice. In the appendix you will see in view of the fact that the meeting was called off last year and the program committee had arranged the program they finally decided that instead of the whole meet-

ing being given to formal speeches and papers this afternoon would be spent on this very important problem.

It was also recommended that the next annual meeting of this Association be devoted entirely to the problems of this Association, in the light of the crises that now confront psychiatry. This recommendation has not yet been acted upon by the Council, nor have the other recommendations of this committee. The Council has waited to see the reaction of this audience and wishes of these members before it takes action on the recommendation of your committee.

It was felt that the best way we could quickly organize an expression of opinion was to take the component societies and ask representatives of those societies to discuss the content of that report with their members and report in not to exceed five minutes each today. We shall begin by hearing from the representatives who are arranged in alphabetical order according to the names of the speakers.

The first speaker will be Dr. Leo Bartemeier, representing the American Psychoanalytic Association.

DR. LEO BARTEMEIER.—*Mr. Chairman, Members of the Association:* The collaboration of the Program Committee and the Council with the special committee in providing this opportunity demonstrates their appreciation of the serious import of the questions and the decision which is concerning us this afternoon.

If we content ourselves with adding our reactions to the committee's report, we are complying with what has been requested. If we decide today whether we wish our Association to continue to function as it has in the past, or to expand its activity and become more effective in the future, we demonstrate by our action that we are genuinely interested in this organization of which each of us are integral fractions.

The special committee has debated seriously and repeatedly since January 1945 and if this general assembly fails to take action in one way or another, we as members of this Association will have done no more than to have obediently complied with a simple request.

Before we adjourn this afternoon, it behooves us to determine our future course.

Soon after the special committee began to deliberate the question to which it had been assigned, it became evident that it could function more adequately with a suitable increase in its personnel; its recommendations that it be enlarged was not concurred in by the Council of this Association. The committee continued to feel the need of additional minds in order that its recommendations would have the benefit of more careful consideration.

This general assembly will do well to express its opinion in this connection. It can at least offer its suggestions to the Council.

The Council has seldom had the opportunity to know the voice of the membership and I am sure it would welcome our suggestions. You will note

that the report of the special committee as submitted in December 1944 was accepted, but I call your attention to the fact that no action has yet been taken by the Council regarding the recommendations of the committee for our next annual meeting.

It is sincerely hoped that this general assembly will pass a resolution expressing itself for or against this special recommendation of the committee. It has become evident to us all that the time has come for our Association to concern itself with the practical problems which our members meet in their daily work.

Ladies and gentlemen, we are the Association and we must express our wishes no later than this very afternoon whether or no we would like the kind of meetings suggested for next year. Each of us is faced with problems which we as individuals cannot solve, but which we as a body may work out to our individual satisfaction. These problems are also the problems which affect our psychiatric education, the legal aspects of psychiatry and the hundreds of thousands of patients in our state hospitals. The time has come for us to see that we can no longer content ourselves with our own individual lives. We are part and parcel of this Association of the communities in which we work, and the country we call our own.

We learned this lesson in the war and we must not fail to profit by this great experience.

DR. MENNINGER.—We have asked these men to talk to us frankly and with the understanding that we all want to exchange views. The next speaker to do so is Dr. Daniel Blain who represents the Veterans Administration.

DR. BLAIN.—Ladies and gentlemen, I am in a unique position. I wonder if you know that the position I hold in neuro-psychiatry in the Veterans Administration was nominated by the official Committee of Veterans Affairs of the A.P.A. and therefore I come to you as your immediate representative. There was no question in General Hawley's mind as to my qualifications whatever. He merely said, "You have been nominated, will you take the job?"

I come to the Association with considerable feeling that I have a right to tell you what I want to. This concerns the 20,000,000 veterans. The rest of the population cannot be considered separately. One of my efforts is to share the responsibility of professional men in medicine. We are getting a great deal of help but we want more. I interpret my position to assist General Hawley in all matters pertaining to psychiatry, clinical psychology, immediate treatment in hospitals for the prevention of mental disease and the plan was considered for the immediate present and the distant future.

There are 20,000,000 veterans in the entire country and its wisdom will affect the proper expenditure of a total cost of ten billion dollars. That is a very, very conservative figure but I was afraid that if I was quoted, I better not get too near the borderline of shared responsibility with

the Veterans Administration as well as those of you to whom I go for help.

I cannot afford the real responsibility as long as I am in this position. Our problems are in part, the following: Physical plants which means locations, size, functional planning, estimation of the number, types of beds needed now and in the future, the extent of out-patient facilities needed now and in the future, the rendering of service, sufficient doctors properly selected and trained with sufficient compensation. We need nurses, social workers, clinical analysts and other professional lay workers and members of all of the vitally interested public. The rendering of proper services means the acquiring of new knowledge and the clarification of present knowledge. We need a method of description of such knowledge which will allow the transference of information accurately and clearly and permit studies and comparisons that have sufficient value to make such studies worthwhile.

Our understanding of the problems of psychiatry should help us to place with reference to other specialties in medicine the part that psychiatry should play in the complexities of national and international life and factors of national and international life which influence the extent of mental disease.

The rendering of proper service means the delineation of functions of various groups of workers and the specific part each should play and the coordination of their effort.

These are some of the things which we need. I mentioned many of these factors which need to be clearly understood for the proper planning and treatment of mental illness. Some of these are the proper function of The American Psychiatric Association under its present constitution, and many are being carried out. Some may be considered as proper expansion of function and some are obviously the proper function of other organizations. I join with the President in the idea that The American Psychiatric Association should investigate carefully all of these fields from time to time and decide which belongs to itself, and which to others and that it must adhere to a broad concept of psychiatry in modern life and add to its own responsibility a coordination and promotion of the same point of view in other organizations and coordinate these with its own functions, thereby taking the lead in all matters pertaining to psychiatry and attaining a position as the permanent and paramount leader in the field of mental health.

DR. MENNINGER.—Our next speaker, Captain Francis Braceland, of the Navy.

CAPTAIN BRACELAND.—I will take about four minutes. A great deal of the heat and some of the lightning has been taken out of what I was to say. There are two events that have made me happy. One is the close of the war, and the other is the excellence of the President's address in which he covered point by point many of the things which I would like to have explained.

Upon going to Washington, I was assigned to a

department before getting into Navy psychiatry, the name of which will not now be stated. My job was to answer the mail which went to the White House and to government departments about things medical. I answered perhaps 30 to 40 letters a day along with telegrams to the President, about half of which were complaining about psychiatry and psychiatrists. Some of them were vitriolic and from some it was plain to be seen they were written by people not well and the whole thing struck me that considering all the types of organizations, the only ones we didn't hear from in government were the bodies that we should hear from, the psychiatrists themselves.

I therefore asked several times what could be done about various things and was told this was not an administrative body. I felt in my mind there should be somehow, somewhere in this organization, an administrative body. We saw in the services many things happen because there was no place for us to go. We did appeal to our consultant who gave freely of his time at all times and went everywhere. The committee was very willing to help. In the war committee there seemed to be a lack of something; it all probably should have been worked out in a much, much bigger way than it was.

We see such things as psychology in an anomalous position of being moved in this town and throughout the country into the hands of counselors and so on and the end result of that is that each student graduate from Columbia with an A. B. in psychology will be doing psycho-therapy when immediate pronouncement of that as rehabilitation, psychological warfare and many other things which should be the function of a body which is organized to give its opinion as a body with weight of authority behind it.

There are several things happening and nobody to save them now. I think the President spoke about an exposé in the papers and it would have been much better for The American Psychiatric Association to have said that in public.

I think that our incoming President is having difficulty with his grand old hospital, 90 years old, and that difficulty is being caused by a clerk, an underling in a department and that hospital is being militated against and is being changed and I don't know of any great authoritative body which has thundered about it and said, "That has been going on for 90 years and done an excellent function. We don't want anything to happen to it."

This body is powerful enough if organized to speak for psychiatry and come to the aid of the members when they are in difficulty so that they and state hospital superintendents and other people who are in the public eye do not have to fight this thing alone. Thank you.

DR. MENNINGER.—From our sister country of Canada, and we are happy to have a good many members in that country, we received a letter signed by a considerable number of our colleagues in Canada expressing the sentiment they did not wish any change in the Association. Since then, many

individual Canadian members have told me that was not their sentiment.

Be that as it may, we have asked for two Canadian representatives, one of whom will speak next, Dr. D. Ewen Cameron, Montreal, Canada.

DR. D. EWEN CAMERON.—*Mr. Chairman, Members of the Association:* I should like to disassociate myself from the letter to which you heard reference just made. It was written in another city. (See p. 268, September 1946.)

DR. MENNINGER.—Dr. Anna C. D. Colomb, New Orleans Society of Neurology and Psychiatry.

DR. ANNA COLOMB.—When I received Dr. Menninger's request to get the views of the Society of New Orleans on the reorganization of the Association, my first obstacle was the fact that I was met with the answer, "You go ahead and do it." It took a great deal of effort to get even eight members of the possible thirty members of the organization in the State of Louisiana to gather for a meeting. When we did finally arrive for the discussion of the report that had been sent to us, I found that only two of the eight members had read the report. Finally, it was decided after much discussion to again canvass the rest of the members in the state inasmuch as there is no state local society.

We prepared a report of our local meetings in detail and submitted a list of questions and again canvassed the other twenty-odd members who had not attended the meeting, in order to have a better representation. Finally, however, we got seven more replies, in all exactly 50% of the possible interested members in the state.

We attempted to get in touch with and send copies of the committee's report to the state hospitals, to the members of the various government organization in and around New Orleans. The first question that was discussed was as to the machinery of the organization. The usual response to that was that they knew nothing about it, that they were too far away from where the machinery usually functions to know what was going on and what it was all about and what could be done about it.

As a result of that, there then developed a request that I present to the organization a plea for better representation of isolated areas like ours in the Deep South, in order that we may learn what the organization is doing and what it can do for us.

There developed a good deal of interest, however, in subsequent discussions.

Passing over the fact of the machinery about which we felt we didn't know enough to comment, the general trend of the discussion was the need for education. Most of the group felt that a national organization such as ours was certainly in a position to influence other national organizations such as the general medical organizations, national legal and social organizations and that we should publicize educational and other psychiatric influences they might have, so that it would penetrate

down to the local organizations that we needed more mental hygiene emphasis, that we need more education particularly of the general medical profession, not only through training in schools which would take a long time, which has been emphasized so much in this meeting, but that we need a speakers' bureau that could send speakers to our local medical society and bring to them some of the modern views.

Our psychiatric departments in the state hospitals were particularly articulate about their duties. They said they were too busy and did not have the funds to attend national meetings or spend a week in Chicago or New York or San Francisco. The JOURNAL did not add much to their knowledge.

DR. MENNINGER.—Our next speaker is Dr. Herman A. Dickel, North Pacific Society of Neurology and Psychiatry.

DR. HERMAN DICKEL.—*Mr. Chairman, Members of the Association:* My Association first wished to express a great deal of appreciation to the special committee for sending out the report. They particularly appreciated an opportunity to send a representative to this meeting to express their opinions.

The North Pacific Society of Neurology and Psychiatry is a group representing specialists in psychiatry and neurosurgery in that part of the country, Washington, Oregon, and British Columbia. It is the only affiliated society that I know of that has international makeup and as such, its individual viewpoints are great and very broad and therefore many conflicting reports came to me to bring here today. However, there are certain ones I can summarize for discussion.

The vast majority of members believe wholeheartedly in the committee and are back of it all the way. They wished me to express to the Association that as many things be done as possible to modernize the Association to take care of the present needs.

They would like to see the program changed somewhat to make arrangements for more clinical presentations such as is true in a national program for medicine and surgery. They would like to see more panel discussion where leaders are chosen rather than speakers. They would like to see the gradual appearance throughout the country of local sections, not to take the place of the national organization, but rather to extend the national organization so that local meetings might be held. They feel that the attitude of the society should change from being on the defensive to taking a very challenging, aggressive attitude toward their problems and meeting them. Most of the men felt, and this was particularly true of all of the members who are members of The American Psychiatric Association, most of them felt that in some way or other, the local societies should have a greater representation in the governing of the National society. Thank you.

DR. MENNINGER.—Dr. Robert H. Felix, representing our colleagues in the United States Public Health Service.

DR. FELIX.—*Mr. Chairman, Members of the Association:* Much of what I was going to say has been said and I will try to brief my remarks and not repeat.

Any consideration of the rôle The American Psychiatric Association should play in the years immediately ahead must be predicated upon the needs of American psychiatry. Certainly the time is now past when our Association can continue to justify its existence on the present bases of the annual meeting, the JOURNAL, and reports of committees which all too frequently are not followed by definite action. The fact that, with few exceptions, all North American psychiatrists are members of the Association gives evidence of the importance of our organization to psychiatrists generally, and indicates our great responsibility by stressing the leadership that we must assume. The organization must have a positive, a dynamic purpose.

One does not wish to see a sudden revolutionary change in the society for such an occurrence might well be disastrous. Many of us, however, are anxious to see in this Association some re-orientation of emphasis and the development of much needed services to our members and to society with a rapidity which is consonant with the changes in viewpoint that are taking place in our field.

Needed improvements will be considered here under the following headings:

- (a) The annual meeting
- (b) The JOURNAL
- (c) Activities

The Annual Meeting.—This, principal function of our organization, as far as the majority of the members are concerned, is a delightful occasion, somewhat resembling Homecoming Day at college. Although it is not intended to minimize the social aspects of our conventions nor the value of informal discussion of mutual problems, it should be obvious that such an attitude is in great measure a result of the general character of our meetings. We endeavor to include so many presentations in our program that it is necessary to run what amounts to a three-ring circus, with the result that two or three important papers are often presented at the same time. Because of the time element, it becomes necessary to allow inadequate time to many important papers. To many of us there is little that is stimulating or attractive in a series of formal presentations the discussion of which must be sharply curtailed because of time limitations. One can eventually read such papers in the JOURNAL with equal profit.

To this writer, and to others with whom he has talked, it seems that too little time is devoted to discussion groups and much could be gained from clinical conferences. The formal presentations should be limited to lectures or papers on subjects of great social or medical significance to the entire Association and to medicine, and they should be scheduled so that no other activity would conflict with them, thus making it possible for all members to attend.

It is suggested that each morning of the annual meeting be devoted to clinical presentations and discussions and to technical lectures and demonstrations at the various hospitals, clinics and laboratories throughout the convention city; that the afternoons be reserved for the general sessions mentioned above; and that two or three evenings be devoted to round table discussions. For these latter discussions a general topic should be assigned for the evening and the various aspects of the problem taken up in these discussion groups. Certainly such subjects as rehabilitation, industrial psychiatry, psychiatric education, psychiatric research, and group psychotherapy, to name just a few subjects, deserve a much more exhaustive discussion than they can receive under our present round-table scheme.

The Journal.—Because of the great importance now attached to psychiatry in the fields of medicine and the humanities in general there is a considerable increase of activity in all phases of the subject. The results of this activity must eventually be reported to all of us if we are to keep abreast of this ever-expanding field. Since the premier reporting organ should be THE AMERICAN JOURNAL OF PSYCHIATRY, it is felt that it is essential that the JOURNAL be issued monthly instead of bi-monthly as is now the case.

One of the most irritating aspects of the JOURNAL is the tardiness of its issue. This situation should be immediately remedied, so that issues are not routinely received two months late. A number of suggestions could be made regarding the JOURNAL, if time permitted. One example, however, comes immediately to mind. The News and Notes section is anything but timely. For instance, the report of the Annual Meeting of the National Committee for Mental Hygiene, which was held in November, 1945, and the report of the Annual Meeting of the Pennsylvania Psychiatric Society, which was held in October, 1945, were contained in the March, 1946, issue, which was received in the middle of May. This was anything but a journalistic scoop.

Activities.—At no time in medical history has the need for psychiatric services been so widely recognized. There is an increasing demand, not only for proper care of mental patients, but for an active program of therapy in mental hospitals. It is now also generally recognized that extra-mural psychiatric services are at least as essential as work in institutions, since such services are in fact that aspect of a properly integrated program which concerns itself primarily with prevention and early treatment. The great source of support and stimulation for such a program should be this Association. Just as officers of the society, speaking in its name, testified at the congressional hearings on the National Mental Health Act, so should members be designated to give our official views when legislation affecting mental health is under consideration in any of the states. The proper standards to be adopted should be brought to the attention of the legislators, together with recommendations for writing legislation around these standards. This means an active and alert legal and legislative research section in our headquarters

office. Similarly the Association should stand ready to support officially and actively any public mental hospital superintendent in his efforts to obtain legislative action to improve this institution.

Every effort should be made to serve the hospital superintendent or the clinic director upon his request. Such individuals should be able to obtain full information regarding hospital or clinic administration and procedures upon request to our headquarters office. A reference, research, and consultation service in these fields could be set up for which, it is believed, many institutions and clinics would gladly subscribe and pay a reasonable fee. Without detracting from the importance of the needed activity in the institutional field, it must be stressed that in psychiatry as in all other branches of medicine, an ounce of prevention is worth a pound of cure. This Association must become more preventive-medicine-minded than it has in the past. This means much greater emphasis on extramural psychiatry.

It is felt that the activities in the field of psychiatry have become too numerous, too widespread and too important to permit the Association to play an aloof role. Many of us are clamoring for definite statements of policy and standards which we badly need as our authority in making decisions and establishing our own policies. While those standards and policies which have been enunciated have been, in general, accepted as final authority, it has been necessary in some instances to establish standards of our own because none were forthcoming from this Association. The establishment and dissemination of such standards is a service which the Association should consider as a duty of first importance, and in so far as it has been necessary for this to be done outside of the organization, it is to that extent an indication of failure of the Association to do its full job.

Now that the war is over and our members are returning to their peace-time work, this Association should stimulate and sponsor training institutes and refresher courses over the country, drafting such of our membership as are qualified to participate in the instruction. There should also be official sponsorship of regional meetings at various times of the year for more frequent exchange of information that that afforded by our annual meeting.

The activities as set forth here cannot be carried on successfully by men working part-time. There should be full-time personnel to administer and direct all the activities carried on by the Association, such personnel to be responsible to the organization through the Council and President. It may be that at a not-too-distant future date it will be necessary to employ several individuals to carry out these tasks, as recommended by the special committee, but for the present, at least, it is felt that the appointment of one person serving as full-time Medical Director would be a very constructive step. He would be authorized to express our organization's views on questions with which we are concerned, and it is suggested that such views be expressed whenever it is thought advisable, whether or not they are solicited.

The suggestions made here are intended to place The American Psychiatric Association in a position to better serve its members and society and to take active and aggressive leadership in the field of mental health. As all of our members know, great developments in our field are afoot. If all of us are to coordinate our efforts for the common good this Association must take its rightful position of leadership. As members, we should be able to look to it for advice, support, and counsel. In order for this to be possible, the Association must be willing to take a positive stand on many issues and to defend this stand vigorously. The time is past when progress can be made by the adoption of a middle-of-the-road policy. We must, as an organization, press for improvements all along the line.

DR. MENNINGER.—Dr. Earl K. Holt, Massachusetts Psychiatric Society.

DR. HOLT.—Inasmuch as some of the material and points at issue seemed to have been settled by Dr. Colomb's address, I will omit those.

These comments of mine are not formal conclusions on any point reached by a vote of the organization which might be considered as compromising to the position of any of our members as they come up for final action. They are an attempt to interpret the attitude of a substantial segment of the Society informally secured. I think it would be easier if there had been more complete uniformity—easier to come here as an advocate, if we had been 100% in favor of one thing, but that wasn't true. There was some difference of opinion on the need for reorganization.

No society has an organization that is so sacred it can't be attacked and changed. This society can change its structure, but we have a few differences of opinion there. The question of the light gradually fading from the society has been raised.

One suggestion was received which I would like to offer, that we visualize the duties of a Director to be defined as precisely as possible and with a view toward establishing these functions, that they be executed by one or possibly two special committees, but with ample authority to carry out their work and the members of these committees might be allowed a reasonable fee. Any committee would be required to continue from year to year without indication of perpetual membership. There is a uniform support or expanded activity of this society and there must be no attempt to hold off or wait for another year or delay action.

There was a very strong sentiment in favor of the more democratic method of election and as a number of suggestions were offered, too numerous to justify going into and most of which have been heard at other times, I will not go into that.

They suggested the larger use of general meetings and less sections in the organization of the Society, but there is ample justification for this multiplicity of sections and probably that will have to continue as far as we can see.

There is no strong opposition to a moderate raising of the dues because of increased expense.

There is a suggestion made that the Society could establish a membership entrance fee, a substantial fee which would raise some money, but none of these measures would be means of supporting the amplified program of activity as we visualize it for the Society. Thank you.

DR. MENNINGER.—Dr. William Keller, Kentucky Psychiatric Society.

DR. KELLER.—Out of a total membership of 40, 26 of whom are members of APA, there is one specific purpose which is that of stimulating interest in things psychiatric. Many of our members are satisfied with the gradual growth of the Association as it has evolved. Certain members have expressed dissatisfaction with particular areas. It is my duty to enumerate those opinions.

From the organizational standpoint, dissatisfaction is expressed by a definite minority on the policy of nomination and the election of officers, suggesting there be more nomination from the floor. We submit that the various committees of The American Psychiatric Association do an excellent job in their spheres but too many of their recommendations are filed away without any specific action, thus nullifying their time and effort.

We believe that the membership should be kept informed of the overall purpose, aims and achievements of the Association, perhaps through the JOURNAL in the form of Council notes or presidential messages. Warning is given that greater care should be taken concerning the admission of new members.

Most dissatisfaction is expressed over the apparent schism between the different schools of thought. It is suggested that this gap be bridged through the development of a liaison for coordination so that we may be able to receive a blend of all of the available approaches and be allowed to shy away from the "either/or" attitude. This is not to discourage the varied interests, but eliminate the three ring circus motive and bring the greatest good to the greatest number.

In Kentucky we need all the help we can get to further publicize what psychiatry can do and cannot do. If this purpose can be furthered by the publication of bulletins, then we want it. If there is an increase in dues necessary to carry on a common sense plan of education of doctors and laymen, then we are willing to pay for it.

We would like to see the psychiatric curricula expanded in medical schools. We believe there is at present an unparalleled amount of information in objectives and results which should under no circumstances be allowed to move by the board. The hundreds of thousands of carefully worked up records of psychiatric casualties available in the War and Navy Departments, if not followed up immediately, will be forgotten and lost forever.

Lastly we submit that these are seething times in the matter of reorganization of The American Psychiatric Association. We would suggest a paraphrase of Kentucky's own State motto: "United we succeed, and divided, we fail."

DR. MENNINGER.—The New England Psychiatric Society was wired three times to send a representative. Since they have no representative here today, we will go on with Dr. R. P. Knight of the Kansas Psychiatric Society.

DR. KNIGHT.—*Mr. President and Members:* This afternoon we heard a most excellent address from our retiring President. Were we to consider this speech carefully, we would find it covers almost everything that needs to be done in the field of psychiatry. It has taken a lot of thought; it demonstrates broad vision, it has seen the problems in the country today, however, President Bowman, this should have been an inaugural speech; not a retiring speech. The new President does not need to pay attention to this speech. The new President appoints a committee. The speech is published and it is read and it is filed away. There is no way to get implementation of action unless the committee which hears the speech wishes to draw something from it and turns Bowman's recommendations into action.

It seems to me that is one of the faults of our organization, that we let a retiring president tell us what he recommends at the end of his term and then do nothing about it. Our committees seem to be appointed to study and not to act. The committees make reports and the reports are distributed and often the committees do not meet. I spoke with one member of an important committee this afternoon. His committee had not met and we had heard nothing from it during the entire year. The committee was called to meet with one other organization and nothing came about.

Too many of our committees are or have been appointed for honorary reasons and their reports do not reach out to the members and the reports are not turned into action. I would like to second Dr. Cameron's recommendation especially that the two very important committees on education and public relations be re-constituted and turned into committees that are active and aggressive.

There is no program in the Association that takes care of all of the different types of members. The backbone of the Association as has been traditionally developed, is the state hospital which composes the largest portion of our membership. These men have had very, very little help in their local districts. They have to go to the legislature and fight for budgets to take care of their patients and salaries adequate for them and for equipment and new buildings. We have standards which they are trying to live up to. We criticize them for not having adequate facilities for their patients, yet the Association does not throw its weight in the fight and each local section has to try to get these facilities that they are working for.

We have other members in private practice and teachers and all of these men need to have a program that is implemented in some way that the Association backs it up and carries it out.

I would summarize this by saying that we need the program that President Bowman put forth and these recommendations must be implemented

through committees which work and which turn such recommendations into action:

DR. MENNINGER.—We have a representative from Illinois, Dr. John J. Madden, Illinois Psychiatric Society.

DR. MADDEN.—*Mr. Chairman, Members:* As nearly as I have been able to ascertain in informal conversation with the members of the Illinois Psychiatric Society, there is a feeling abroad that our Association has remained too aloof and has not interested itself as an organization in the many problems which confront psychiatry and psychiatrists today.

To name a few of these: Mental health laws, obtaining appropriations sufficient for state hospitals to provide proper care for the mentally ill, and the difficulty encountered by privately practicing psychiatrists to obtain suitable bed space and general hospital room for the care of the mentally ill.

As a possible explanation for the meager response which the committee received to its questionnaire, one might remark that many, many members were practically taken aback and rendered inarticulate by a request for counsel from our Association, since in the past most of the responsibilities and many of the activities of the organization have been carried on by relatively few of the members.

As has been remarked, our President in his excellent speech this afternoon has covered most of the points in detail that I have heard mentioned by any of our members. Our members feel the great need for this committee and it is their feeling that much of what we desire may be accomplished by devoting an entire annual session to a consideration of the problems of each organization of The American Psychiatric Association.

DR. MENNINGER.—The committee received another group letter signed by a considerable number of the colleagues in Pennsylvania protesting against any substantial change. The Pennsylvania Society was asked to send a delegate and they sent us as their representative, Dr. LeRoy M. Maeder.

DR. MAEDER.—*Mr. Chairman and Members:* When the special committee asked for a report for the consensus of opinion of the Pennsylvania Psychiatric Society, we had a meeting in order to obtain a sampling of opinion. The Pennsylvania Psychiatric Society was founded in 1939 on the general plan and organizational merits of this Association. We have felt and we do feel that The American Psychiatric Association as constituted at the present time has many tremendous and important values which should be preserved. As Dr. Menninger remarked, from that letter there were many Pennsylvanians who were opposed to any considerable change. We do want to preserve the meetings, the educational program, the clinical papers and research. We also feel that the social function, that is, the chance here of getting together and exchanging our ideas is of tremendous importance.

This, however, is only part of the point of view of the Pennsylvania members. We feel that we should have much closer, continuous and vital integration and effective interrelationship between the affiliated societies, the state societies and the various local societies and The American Psychiatric Association.

I believe it was the Pennsylvania Society which first asked Council whether we might not have a representative at least sit in on the meetings of the Council of the APA. That privilege was granted several years ago. Prior to the Centennial Meeting in 1944, I had the honor to be asked to help get together, at least chair a meeting of representatives of affiliated societies at that time. We met and had some vital and important discussion and the result of this discussion was that we asked Council of the APA to appoint a committee on Affiliate Societies which might function with the Chairman and report at the annual meeting of Council. Council saw fit not to follow out that suggestion. Pennsylvania's members, a good many of them, feel we are losing a real opportunity for effective use of the affiliate society if we do not effect an organization whereby we can exchange ideas. We can conceive of representation of the affiliate society at the annual meeting of the APA after their various sections have gotten together and exchanged ideas and channeling them to the Association, which would be ideas prevalent in the membership throughout the country which would be a very valuable contribution. In turn, this information can be pooled in Council and then effective action taken back through the affiliate societies which stand ready to work on various projects that come up.

I need not mention the various vital projects that each state hospital has. I will just say we will have three existing in each society, namely: Increased appropriation; improvement of the mental hospitals, personnel and standards; increased use of general hospitals, out-patient and in-patient care and also the matter of post-graduate education to veterans.

I think we can do a lot more than that if we have a continuous interchange of ideas, not only of ideas, but actual work policy the year through. So Pennsylvania does have a very definite, vital integration and coordination of the National Association with its affiliate society which stands ready to cooperate to the fullest extent with the mother Association.

DR. MENNINGER.—Our colleague in the United States Army, Brig. General William C. Menninger.

GENERAL MENNINGER.—I want to express in quotations, and almost all of my remarks are in quotations, a representative opinion of a considerable number of the 900 members of the Medical Corps in the Army.

The Association was described as "dormant and passive, conspicuous by lethargy, detachment from reality." These are the comments of various people. "Lagging in the assumption of responsibility to the states and world communities."

"It is dominated by institutional viewpoints."

"Too much politics in our leadership."

Some of the men expressed their views a little more expressively; they felt the APA had muffed the ball disastrously by not assuming a more far-sighted and aggressive leadership.

"The Association has failed in its obligation of health by not having sufficient public education and not keeping the government abreast."

A criticism came from one member, as follows: "I was one of the 92% who failed to reply to the letter of inquiry. My honest reply would have been that apart from receiving the JOURNAL I have not been aware that The American Psychiatric Association has played any rôle in my professional life." That sentiment was voiced by others who felt they had no personal participation and did not know what the Association was doing or what it could do or what they should do. There were several expressions that they had no help from the Association in their job in the Army. Several believed it could have been.

There were many suggestions relative to the organizational structure. It was pointed out that the president serves for one year and then he is out. "What do the committees do?" Repeatedly the phrase was used: "We need new blood in the leadership. During the next year, let us have a president of the Association who is a man who is fearless and aggressive and not being promoted for faithful or long service."

Another wrote: "There is no evidence that the old line organization has even a grasp of the psychiatric problems of the veteran."

There were repeated expressions of criticism of the JOURNAL. "The older generation has a stranglehold on the organization." They brought out the fact there was one man under 50 years of age among the officers in the Council. There were constructive recommendations that the APA should have psychiatric training and it should seek to increase the number of residencies. "It should have available a list of available residencies."

"There should be graduate seminars."

"What is the Association doing with regard to better acceptance of the undergraduate?"

"Many psychiatrists in the armed forces are aware of the pressing need for education. Why don't we get a real public relations officer? The public wants information."

Because of the Army experience, the psychiatrists were aware of the value of close contact and several indicated that the Association should make plans for active indoctrination of the purposes of the Association. "The members want to know what is happening."

"What is the Association doing?"

"What has it done?"

The suggestion was made to the Association to take the initiative in an effort to get organized assistance to state hospitals. As might be expected, there was strong feeling for the need of a Section on Military Psychiatry. Three individuals suggested a recommendation be made by the Association to place the Surgeon-General in his rightful place

on the General Staff. There was an equally militant recommendation for assumption of the relationship of the returned veteran now and not wait until a non-military group took it over. The Army is working closely with the psychiatrists. The suggestion was made that we should have inter-relationships with these groups and that they should make a closer liaison in training and working with them. So long, my five minutes are up!

DR. MENNINGER.—Our colleagues in Canada are further represented by Dr. R. C. Montgomery of Toronto.

DR. MONTGOMERY.—*Mr. Chairman and Members of the Association:* The American Psychiatric Association is of very great importance to the Canadian psychiatrists. There have been Canadian members since the earliest days of the Association and of the 72 presidents of the APA, 6 have been Canadians and in recent years Canadian psychiatry has benefited materially by the professional advice which it has been able to secure through the APA.

In 1936 and 1937, Dr. Hamilton and Dr. Cameron conducted a survey of the Ontario mental hospitals and the mental health services and their report has been of great assistance in modernizing and extending our facilities for the care of the mentally ill in Central Canada.

The standards of The American Psychiatric Association for personnel requirements in mental hospitals have been used as a guide for many years. The APA adviser on psychiatric nursing has given tremendously of her time and advice. The Editor of the JOURNAL, Dr. C. B. Farrar, has occupied a prominent place in Canadian psychiatry for many years, and he has exercised an important influence on the development of young psychiatrists. The Canadian members of the APA are indebted and have a substantial interest in the Association. An examination of the Directory of The American Psychiatric Association published for 1944-1945, will show that there are 82 Fellows and members of the Association. These members come from all nine provinces of the Dominion. In number they represent only a small proportion of the total membership of the Association and it is therefore appropriate to put forward our views in regard to the matters of policy in this manner.

On February 12 last, I received a wire from Dr. Menninger, Chairman of the Committee on Reorganization in which he asked that I canvass my Canadian colleagues regarding their views and undertake to speak for them at this meeting. On receipt of ten copies of the committee's report, I forwarded one copy to a representative of each of the nine provinces asking for views. The replies I received contained a number of suggestions and in order to determine the extent to which these were truly representative of the Canadian opinion, I sent to the Canadian Fellows and members a short questionnaire and it is the result of this questionnaire which I propose to report to you now as an expression of Canadian opinion on some of the questions now under consideration.

On behalf of these members, I can report as follows:

The Canadian members are very strongly 90% in favor of a proposal made by one of our own members of APA undertaking to establish standards, grants and formal approval to mental hospitals in a manner similar to that which the College of Surgeons approves.

The Canadian members are strongly in favor of the further development of regional groups and regional meetings within the Association.

The majority or 70% of the Canadian members are in favor of recommending the proposal that the program of the next convention of the Association be changed to provide for a larger number of small discussion groups and fewer formal speeches and papers.

The Canadian members are about equally divided for and against the proposal made by one of our own members as to the method of nominating and electing officers, that it be changed in such a way that individual members will be given opportunity to participate.

The Canadian members are divided equally for and against the proposal that APA publish a fortnightly bulletin providing a more effective means of intercommunication of membership.

The Canadian members are strongly opposed to the suggestion that a full time medical officer be appointed by The American Psychiatric Association.

On the question of increased fees in the interest of reorganization and expanding the functions of the Association, the Canadian members are divided for and against an increase of fees up to twice the present scale, and they are unanimously opposed to any suggestion of an increase which would be any more than twice the present scale.

DR. MENNINGER.—We next have Dr. Roy A. Morter of the Michigan Society of Neurology and Psychiatry.

DR. MORTER.—*Mr. Chairman and Members:* What I have to say is not an official communication from the Michigan Society of Neurology and Psychiatry, but it may be accepted as comment which I have gleaned from the membership during the past year.

We are living in an age now, not an age of revolution, but an age of evolution; an age when members of this society are seeking identification with this organization. In a democracy, the individual identifies himself with the government through the right of franchise. Yesterday the ballot spoke, tradition was set aside. The setting aside of tradition is not fatal, it is evolution.

First of all, we in Michigan would like to ask this question: What is the relationship between this society and the affiliate societies as set up under Article 4 of the By-laws? Can a meaningful and beneficial relationship be established between the affiliate society and this society? Why are there so many additional societies and associations being set up to carry on work which should be initiated by the APA?

We believe that the membership of the Council should be enlarged in order to give the membership of this vastly growing organization the proper representation. We believe the Association should be insistent upon adequate teaching of psychiatry in the medical schools and the establishment of training standards in hospitals approved for residencies in psychiatry.

At this meeting there has been much talk about standards for residencies in psychiatry. I am wondering if we are going to adjourn and go home without doing something about it. Definite standards should be established for residencies in psychiatry. We believe that all state mental hospitals should be graded by The American Psychiatric Association in somewhat the same manner that the medical schools are graded by the AMA. That would be an unpleasant task for this Association but we are sure that it would be a means of raising the standard of all state hospitals in the United States. If a legislative body in any state knew the mental hospitals in their state were graded low, they would be stimulated to a more liberal appropriation.

The committees should have definite assignments and should use their initiative in developing recommendations to pass to the Council for action. We believe that membership on a committee should be accepted with grave responsibility. No one should accept an appointment on a committee unless he is willing to sacrifice his time and expense of attending committee meetings. The members of each committee should live within 500 or 600 miles of each other so the members could get together with the least possible expense and loss of time. To illustrate this point, I have looked over the committee reports over the past ten years and it is surprising how often a chairman of a committee renders a report in the form of an essay and gives no information as to whether or not a committee meeting was held. In another instance, the committee chairman reported there was no matter to discuss and no meeting of the committee was held. In another committee report it was stated that distances were too great and it was difficult to get the committee together.

In conclusion, I want to comment on our President's address and I think we in Michigan can endorse everything that he has said. All we want is to get the committees going. We are anxious to expand the Association as it needs to be done. Thank you.

DR. MENNINGER.—We have two more speakers, and then the audience will be asked to contribute. Dr. H. M. Tiebout, Connecticut Society of Psychiatry and Neurology.

DR. TIEBOUT.—*Mr. Chairman and Members:* The Connecticut Society for Psychiatry discussed the report of the committee in a meeting in March of this year and while comments were many, they were varied and nothing clear-cut in the way of conclusions can be brought to this meeting. However, on two points there seemed to be general agreement. First, there was no wish to increase

the dues to any appreciable amount and thus provide the way for what was termed to be a top-heavy central organization. Any centralization in any state is feared.

The second point of general agreement was with respect to the proposed news letter. This was considered to be a step in the right direction as it was thought that it might provide a means of informing the membership and keeping their interest aroused. As a matter of fact, as I listened to the discussion, I was struck chiefly by the relative unconcern about the chances for success despite planning with several key members and it was not possible to whip up a lively discussion, the attitude being pretty well summed up by the remark, "What's all the hooting about?" and attitude of disinterest which of course originally inspired the activity leading to the report itself. As I pondered about what I would say at this meeting, after our Connecticut Society's inconclusive session, I was dismayed by the lack of concern and began to wonder about it.

I then reviewed my six or seven years as an officer in the Connecticut Society and realized that our official contacts with the APA had in those years been limited to requests from Mr. Davies to keep his office up to date with the names of officers in the society. The first step away from this isolation was when the Council invited a member of the affiliate society to sit in during its sessions. This was clearly a move in the right direction.

It next occurred to me that instead of having the representatives sit in as an observer without the right to vote, if he could come as an accredited member with a full right to vote, that would create a sense of unity between the state groups and the national organization and do away with the present unsettled and, frankly, hit-or-miss relationship.

With this thought in mind, I got a hold of Mr. Davies yesterday and found from him that under the present Constitution and By-laws, this proposal was out of order, the reason being that qualifications in the state societies vary from those in the APA.

While this particular idea has now to be set aside due to lack of liaison, it still remains as a consequence, not as a representative of the Connecticut Society, but as an outgrowth of my reaction to our meeting.

I would like to recommend, among other items, that the Council itself, or through a committee, study the present status of the affiliated societies and propose specific steps whereby these groups may be brought into functioning cooperation with the national organization. I would also like to see a study made of the affiliate groups to see whether they may serve a special function which may solve to some extent the problem of bigness through decentralization. Too much like Topsy, the affiliate societies have "jes' growed."

DR. MENNINGER.—Our colleagues in the State Hospital System are represented by Dr. M. A. Tarumianz.

DR. TARUMIANZ.—*Mr. Chairman and Members:* I am neither ashamed nor embarrassed to represent state hospitals although the state hospitals have been criticized severely. Pictures are shown in various magazines and movies depicting the hospitals as concentration camps in the United States, but who is responsible for these concentration camps? Certainly not individual members of the Association, but undoubtedly the society as a whole. It is my opinion that the society has depended entirely too much on the work and accomplishment of the Council. I can remember very well the first time I appeared before the Council, and they are all my good friends, the report of my committee was graciously accepted and their desire was to file it, as usual. However, I have some belligerent and aggressive moods at times and I demanded that they should pay more attention than the usual acceptance and filing, so the result of that has been that the Council has been gracious in the past four years and today we are accomplishing something in regard to the standards and policies of the Association in regard to hospitals.

It is pitiful indeed when you consider that The American Psychiatric Association has no actual respect in the community life which one expects of the American College of Surgeons or the American College of Physicians. One sees that for them there is an air of respect on the part of the people, yet we are in our small communities almost a laughing stock. When we speak of The American Psychiatric Association, no one intends to pay any attention because they don't know anything about it. I think the time has come when The American Psychiatric Association should assume its rightful leadership and that can be done only through democratic processes. Keeping various offices for various individuals because of past experiences and past achievements is not sufficient. I think the time has come when regardless of long service and various achievements a man should not assume the responsibility of office unless he can sell the proposition of psychiatry to the people in the right way.

Therefore, I believe in this reorganization and I believe that the reorganization must come from proper and undoubtedly a normal approach. I suggest and I am sure that it is the opinion of most of the men and women members of the Association that we request or pass the resolution demanding that Council provide for the extension of work of the Committee on Reorganization and enlarge the number of members of the committee. That will come in the form of a resolution in a moment.

May I for a moment represent or speak on behalf of the Committee on Standards and Policies. We have been fortunate and I think we are possibly the only committee that has been as fortunate as we in that Council has unanimously approved our standards for mental hospitals and out-patient clinics. At their last meeting, the Council passed the following which was presented to them by the committee:

"It is the opinion of the Committee on Standards and Policies that in view of the activities of various

lay groups that the Association should take immediate and vigorous action as follows:

"First, to set forth the actual status of mental hospital care of patients throughout the country.

"Second, to state the reasons why deficiencies have always existed and have been aggravated by war conditions.

"Third, The American Psychiatric Association should fully support and take immediate steps to give effect to the last three paragraphs in its report."

May I read the three paragraphs? It won't take a minute and it is very necessary and essential for you to know these three paragraphs.

"The committee is in favor of The American Psychiatric Association assuming its rightful leadership and taking positive, aggressive steps in achieving success in its endeavor to teach the American public to consider psychiatry as a legitimate, civic need as long as mental patients are treated in institutions.

"At present the rate is 65¢ per capita per diem and a maximum cost of \$2.00 per capita per diem.

"The committee believes The American Psychiatric Association should become more realistic and demand that every state hospital consider a minimum of \$5.00 per capita per diem necessary for the care and treatment of the subacute and convalescent cases, and \$2.50 per capita per diem for the care of various types of chronic cases."

These are vital issues. You can pass all the resolutions you want to, but unless the APA, through its affiliate societies and other means backs us up to demand from the people the amount necessary to take care of our patients, we still will continue having "concentration camps" in the United States, and there is no other way you can change that situation!

Mr. Chairman, first I would like to present the following resolution: First, to enlarge the special Committee on Reorganization; second, to continue the committee with the request to work with the Program Committee; third, recommend that the committee's proposals for the 1947 meeting be carried out. I move this motion be presented to the society.

PRESIDENT BOWMAN.—This represents a resolution. This is not a regular business session, but it should, I think, be brought before the group and we should get your opinion about it. I am sure the Council wants to know what the opinion of the members is and would like to hear it. Any resolution can be referred to Council and can be referred back at a regular business meeting if necessary. You have heard the resolution. Is there a second to it?

The motion was severally seconded.

PRESIDENT BOWMAN.—I think the third one concludes the idea of the program for next year.

DR. EDWARD STRECKER.—I think it would be more fitting if you presented each resolution separately. There might be difference of opinion about the whole group.

PRESIDENT BOWMAN.—There are three items in the resolution and if there is a question of difference of opinion on certain items, it would save time, I am sure, and be desirable to break it up into the three component parts.

DR. MENNINGER.—Dr. Bowman, I have an objection. I am Chairman of this committee, and I am ably helped by Dr. Bartemeier, Dr. Bennet, Dr. Ackerly and Dr. Ratliff. You can imagine, having heard what you did this afternoon, what kind of a job this was to try and at the same time make some suggestions in change of structure and changes in the functions of the Association about which so many people had so many different views.

We requested that the Council do three things and the Council felt inclined not to do those things, at least pending your opinion, but Council also has no more meetings at this session. Once again this would be deferred until December. Your committee does not wish to continue in this ambiguous and indefinitely postponed rôle. We will be glad to surrender this job to anybody who is willing to take it. We have three times resigned. If you want us to continue, we have to continue with some assurance that we are being backed by the members, so the Council will take us seriously.

PRESIDENT BOWMAN.—I don't see that that has any bearing on the question of voting on three different items. Secondly, the Council may hold a special meeting, and will if there is a reason for it. After you finish voting on this, I have a few points to say myself. I think there has been only one side presented here. No one from the Council has spoken representing the Council and I have a few devastating criticisms about the membership and I think it would do them good to hear it too!

For example, we hear about our affiliated societies and the need for representation and their wanting to vote on the Council. We have 12 affiliated societies and they are invited to sit in on the Council. We get 10 of them here today. Do you get 10 of them coming to the Council meeting? You do not!

Then you get the complaint that the Council is arbitrary and they have nothing to say. I say it's their fault. They don't come to Council meetings. They don't have representatives there and it is unfair to the Council to be criticizing the Council for arbitrary action when the affiliated society doesn't have a representative there. I doubt a single affiliated society has had a member at all of the sessions of the Council.

It seems to me the Council is being made a little bit the scapegoat for a lot of apathy and other qualities on the part of the membership and then when things go wrong, they want to blame the Council for a lot of things which I think, frankly, are their own fault.

They say they don't like the action of the Nominating Committee. Did they get up and nominate and elect three other persons as members of the Council as was their right to do? Nobody has the least objection to their doing it. Nobody is rail-roading that.

Only 8% of the membership answered the letter of this committee and it seems to me the membership is largely to blame for most of these things, much more so than the Council.

Getting back to these resolutions, it seems to me if there are persons who want to object to one thing and vote for others, that we could very properly take up each one of the three points separately and maybe you all are in favor of all of them. Dr. Tarumianz has expressed his consent for it being done that way. I think Dr. Menninger went over on another tack.

DR. MENNINGER.—The point is, your committee as it now stands has gone as far as it knows how. It wouldn't make any difference whether you increase the committee to 20 or to 50, we don't know what else to do. You would have to call us together and tell us.

PRESIDENT BOWMAN.—I don't see that that raises any objection to considering the three items individually and since Dr. Tarumianz has consented to it, I will ask you to vote on this resolution, each item separately. The first item is to enlarge the Committee on Reorganization. Is there any discussion?

DR. DIETERLE.—I understood when I came, that the members on the floor could talk too. I have been a representative to this organization for 15 years and I have never had a chance to express the thoughts of my group. I would like to mention a few points which haven't been mentioned.

It seems to me desirable to consider that in the selection of the Council, the ages of the people be considered. I would propose that one-third of the Council be men under 45 years of age, one-third between 45 and 55 and the maximum of one-third of men over 55.

PRESIDENT BOWMAN.—You are not speaking on this point. You will have to wait until the resolution is voted on.

A VOICE.—I would like to amend the motion that if the committee is to be enlarged, the new members be men under 45 years of age.

PRESIDENT BOWMAN.—There is an amendment to this first section. Do you wish to accept the amendment, Dr. Tarumianz?

DR. TARUMIANZ.—There might be a fine man of 46. I see no reason why it should be limited to any age. I think there are splendid men of 47 years of age.

PRESIDENT BOWMAN.—We will not ask Dr. Tarumianz how old he is. Do I hear a second to that motion?

The motion was properly seconded.

PRESIDENT BOWMAN.—The amendment is seconded. Is there any further discussion on the amendment?

DR. MYERSON.—As an old guy, I object. Let us consider the mental alertness because there are

some men of 46 who are senile and men of 65 who are not.

PRESIDENT BOWMAN.—All those in favor of the amendment that if the committee is enlarged that the members appointed to it be under 45 years of age, please make known by saying "Aye"; opposed, "No." Not carried. The "noes" appear to have it. The amendment is voted down. I guess there are too many men 45 years or more in the house.

DR. JOSEPH WORTIS.—May I propose a similar tentative amendment which may meet the approval? It is an amendment that the Reorganization Committee be enlarged with due regard to adequate representation from various elements in the Association, viz.: Younger men, veterans, divergent psychiatric schools, and so on.

PRESIDENT BOWMAN.—You have heard the amendment.

DR. TARUMIANZ.—I accept the amendment.

The motion was properly seconded.

PRESIDENT BOWMAN.—The amendment is accepted and will be boiled down into the original motion.

May I say one word here which I think is due this Association as explanation; during the past two years when over one-third of you have been in the Army, and have not been available for committee service, we have deliberately not put you on committees and that was not a discrimination against you. I think there are some who have the feeling that that was a question of discrimination. It was my feeling that it was not fair, either to the man in service or to the Association to ask him to serve on a committee or take an appointment when he might be in Japan or somewhere else. The result is that a number of committees during the past year are filled with non-servicemen and that has become a feeling of the servicemen being discriminated against. I wanted to tell you exactly why I did it and it was my feeling that as soon as you came back, then we could call on you and many of us will very gratefully turn over the reins to you. I would not want any of you to feel what I think some of you may have felt that there was discrimination against servicemen. That was the policy and I wanted you to know why. I assume complete responsibility for that myself.

We are ready to vote on the resolution for enlarging the committee. All those in favor of having this committee enlarged make known by saying "Aye"; opposed, "No." It is carried unanimously.

We now have the second part of the resolution that the Reorganization Committee continue to work with the Program Committee.

The motion was properly seconded.

PRESIDENT BOWMAN.—Is there any discussion on that? If not, those in favor make known by saying "Aye"; opposed "No." It is unanimously carried.

The third part, to recommend that the committee's proposals for the 1947 meeting be carried out.

The motion was properly seconded.

DR. HAMILTON.—Gentlemen, there are a great many of you that know me, and I know a great many of you and I know that our younger members are keenly interested in getting to our meetings when they can so as to either present their papers formally or talk about their work informally in the lobbies and check that with their colleagues.

I know that there are younger members who feel aggrieved that I am now the representative of the "self-perpetuating" group who are holding down persons who otherwise would attain a much higher position earlier, but quite aside from that, there are a great many of our members who will be keenly disappointed if this organization decided that there shall be no presentation of work done, work attempted, or work in prospect.

I very earnestly hope, gentlemen, that you may be quite content with the very proper direction that the Special Committee will collaborate with the Program Committee. I should greatly deplore an action by which you tie the hands of our able Program Committee which is a continuing body and forbid them to have nothing on the program except a discussion of our troubles.

PRESIDENT BOWMAN.—I may say that I think there are probably really two questions here. One is whether there shall be some discussion of this problem provided for at the next meeting; or second, whether the entire meeting shall be devoted to it and it is my understanding that the recommendation of the committee was that the entire meeting be devoted to it.

DR. TARUMIANZ.—I don't think it is absolutely essential. We consider that the majority of time should be spent on it.

DR. MYERSON.—On the question, I would like to say this. I agree with Dr. Hamilton that a meeting on rules and regulations only next year, will be a departure that will be deplored when put into effect, by the same men who are at this moment in favor of it. It has been a great habit with us to have papers read and I think that ought to be continued regardless of anything else.

Let us put the resolution something like this, that the Committee on Reorganization and the Program Committee make an equitable arrangement by which sufficient time will be given for both aspects of the activity of the Society.

PRESIDENT BOWMAN.—Do you offer that as an amendment?

DR. MYERSON.—I do.

DR. TARUMIANZ.—It is agreeable to me.

PRESIDENT BOWMAN.—It is accepted then by the proposer of the motion. Is there further discussion of that motion?

DR. FRANK TALLMAN.—I don't represent the Ohio Neurological and Psychiatric Society because one does not exist. I represent a state that

has been somewhat in the news and has been by inference mentioned in this meeting. I am speaking to this motion which says that the committee should be continued next year and the program should have a fair amount of study of reorganization because I believe that this organization has a responsibility to the patients in the hospitals, to the doctors, to the superintendents and to the nurses to see to it that never again will it be necessary for newspaper men to call to the attention of the public a situation that so desperately needs correcting. We must not feel that we are martyrs and we must not get defensive. We must not get frightened. We must recognize that people need better care and that if we are wise enough as an organization to recognize it and speak out first and do something about it. I hope that it is adopted.

PRESIDENT BOWMAN.—All those in favor of the resolution of equitable division of time between the consideration of our internal organization and the usual scientific program, made known by saying "Aye"; opposed "No." It is unanimously carried. I would like to say a couple more things while I am up here. First, there has been a great deal of criticism expressed here about our public relations and I think the trouble is that you don't know what is going on. That is probably the Council's fault and my fault. For example, certain movies were produced. I had indignant letters from many of you that I should go on the air and give out a statement blasting the movies and so forth. I took the matter up with our Chairman on Public Education. We went into the matter very carefully and I am convinced that had I followed that advice we would have gotten the most beautiful bit of publicity for that film which would have put it in every movie house in the country. You all complained and wanted us to do exactly the opposite of what you wanted to accomplish. I wrote instructions to the Council and I wrote to Eric Johnston on this subject and I had a nice letter about it. We have worked out very cordial relationships which are going to be helpful, but I warn you at the same time that a self-appointed group of psychiatrists setting themselves up to censor these films and utter pronouncements about it may entirely ruin the official relationships of this organization.

That is the sort of thing you don't know about that goes on undercover. We spent a lot of time and effort on it and you think we have done nothing about it. I think we have spent a lot of time and have really done the very best thing and we have certain acknowledgments which I don't care to give out in public and so forth, but which indicate the very excellent job that the Committee on Public Relations has accomplished and the time and effort that the members of this Council have put in. I think Ed Strecker spent half of his time going around with officials of the Army and Navy and many of us went on various tours with the Inspector-General. We made trips back and forth. I have made three flights to Washington and New York within the last two months from San Fran-

cisco and it takes a good deal of time. A little over a year ago, one of those trips took me eight days because you couldn't get planes. Eight days to get to a luncheon at the White House lasting two hours. I think if you check up on what the other members of the Council have been doing, you will discover that perhaps the criticism of the Council should be that it has not been vocal enough and aggressive in telling the Association some of the things it has done.

I am up here to uphold the Council a little bit on this whole thing because I think they have been taking the rap on many things which, really, they shouldn't. Then you want great hospitals and all the other things and our budget is just about balanced with a thousand dollars to the good. How are you going to get that money? The Council has been working on that and you will hear about that tonight. We have very elaborate plans for the organization of the Foundation and getting money for reserve and all of these things. I can tell you that when you hear about it, I am sure you are going to be pleased. So perhaps the Council hasn't tooted its horn quite enough. Perhaps some of these old men over 45 have been a little more active than some of you feel to be the case.

I am not criticizing this meeting. I think it is fine. I think Karl Menninger has done a wonderful job. I would never have been able to get so many people out and get them interested as was the case today and I am terribly pleased because as I said in my speech, apathy was the main cause of the trouble. It is my opinion that the apathy of the members of the Association is the main cause. How many people were here to vote when we had the election Tuesday morning? About one out of five of the members appeared for that election. I could go on indefinitely. Don't make the Council a scapegoat for some of the things which the members themselves are responsible for. You have the authority any time you want it. You can do these things. You could have elected three Council members Tuesday contrary to the recommendations of the Nominating Committee. You can do any of those things any time you want to. It is well for you to realize that. Perhaps a lot of you people will come to the next election who have been passing it by before. We have had too much apathy on the part of the membership and I say that is the fundamental difficulty, and not apathy on the part of Council.

I know some committees haven't been reporting. I have been trying to get reports. I have done the best I could. It is my fault and I am responsible. In good faith I appointed men on committees and some of them haven't met and haven't reported. Remember, that if you get appointed on a committee now, don't let the next president hear you say, "We're too busy and can't report."

I want to thank you all for what I think has been a splendid meeting which is an indication of your great interest in this and I think it is a fine thing for the Association to have a meeting like this.

DR. STRECKER.—I would like to call the attention of everybody to one thing about which we seem to be unanimous and that was the timeliness and the wisdom of your President's address. I move a rising vote of thanks.

The entire assembly arose and applauded.

DR. MENNINGER.—Our committee wishes to point out two things: First, that the comments reported here and that the committee has submitted in evidence are in no criticism of the Association or Council. What we have been trying to do is get you to express opinions. We wanted men on the platform to get up and tell you what they had heard.

The committee sits here and is offering no criticism and taking no blame, but we do want to give one piece of credit that throughout this, we have been constantly supported in every respect by President Karl Bowman.

The meeting adjourned at five-thirty o'clock.

BUSINESS MEETING OF ASSOCIATION

MAY 30, 1946

The meeting was called to order at 9.30 a.m. by the President, Dr. Bowman. The Committee on Resolutions reported as follows through Dr. Whitehorn, Chairman:

Meeting at a time of crisis and confusion we are especially appreciative of the graciousness of our reception and entertainment. We thank our friends in the Chicago area who as individuals, as a community and as organized medical, neurological and psychiatric societies, have contributed to the arrangements for our comfort and for the transaction of our business.

The fellows and members of the Association express their appreciation of the work of the officers and committees carried on through a difficult two-year period since the last meeting. The activities of the President and the work of the Program Committee have come most immediately to our attention. There is particular cause for satisfaction in the demonstration at this Convention that the organizational machinery of the Association, although it may creak in its constitutional joints, is flexibly responsive to the will of its membership. This demonstrated fact increases the sense of participation and of responsibility of all members.

We are conscious of the historic significance of this meeting. It is the first meeting in the second century of the life of this organization. We have just won a great and costly war—costly in fortune, in life and in health. One of the fundamental issues of this great struggle has been the defense of the dignity of the human personality—an issue which especially touches psychiatry.

As member of a professional and scientific association, we are grateful for the psychiatric leader-

ship which has made psychiatry useful in the armed forces who achieved our victory, and we have in this convention taken certain steps designed to sustain and develop such leadership for future contingencies.

The psychiatric needs of our veterans touch our sympathies and demand wise action. For their sake we feel the urgent need for the recruitment and training of more and better psychiatrists, and for the increase and diffusion of psychiatric knowledge, not only in veterans' hospitals and clinics but among all psychiatrists, among all practitioners and teachers of medicine, and in all fields of effort concerned with health.

The patients in mental hospitals have suffered greatly from the war. The means for their care and treatment, inadequate before the war, have been further reduced. Despite the difficulties and frustrations of a hundred years of effort by this Association we record our renewed and resolute determination, as physicians, to see that our patients get the greatest possible benefit from available resources and we pledge our most energetic efforts, in all proper ways as individual citizens and as an organization, to get responsible public authorities to provide the means for bringing the care of our patients to a proper standard and for putting into effective action existing knowledge and insight for the prevention of psychiatric disorders and for the positive improvement of mental health.

Out of the struggle and distress of the war period have come new experiences and new insights into psychodynamic principles. The pressure of urgent events has drawn closer together in active collaboration psychiatrists formerly somewhat divided in doctrine and outlook. Out of such team work and intensive effort have come technical advances in such fields as group psychotherapy and stimulating insights into the constructive potentialities of patients. From these experiences, as represented in this convention, we gain encouragement for the accelerated advancement of psychiatry.

The report was adopted on motion of Dr. Whitehorn, seconded by Dr. George H. Stevenson.

Dr. Hamilton, the incoming President, was escorted to the platform by Drs. Ruggles and Moersch, and introduced by Dr. Bowman, who also presented Dr. Overholser, President-Elect, and Dr. Leo H. Bartemeier, Secretary-Treasurer.

Dr. Overholser announced the officers elected by the Sections as follows:

OFFICERS OF SECTIONS

Military Psychiatry

Dr. Francis J. Braceland, Chairman
Dr. Lauren H. Smith, Secretary

Psychopathology of Childhood

Dr. Reynold A. Jensen, Chairman
Dr. Malcolm J. Farrell, Vice Chairman
Dr. Oscar J. Raeder, Secretary
Executive Committee
Dr. J. Franklin Robinson
Dr. Lauretta Bender

Forensic Psychiatry

Dr. Hervey M. Cleckley, Chairman
Dr. George M. Lott, Vice Chairman
Dr. Richard L. Jenkins, Secretary

Psychoanalysis

Dr. Robert P. Knight, Chairman
Dr. Gregory Zilboorg, Vice Chairman
Dr. Dexter Bullard, Secretary

Convulsive Disorders

Dr. Willard H. Veeder, Chairman
Dr. H. Houston Merritt, Secretary

At the close of the scientific papers, Dr. Bowman called the meeting to order to consider the report of the meeting of the Council held May 30. Dr. Overholser presented the report (see proceedings of Council), which was adopted by acclamation.

The 102nd Annual Meeting was declared by Dr. Bowman closed at 5:15 p.m.

WINFRED OVERHOLSER, M. D.,
Secretary-Treasurer.

REPORT OF THE SECRETARY, 1944-46

The following is a statement of the membership of the American Psychiatric Association as of April 1, 1946:

HONORARY MEMBERS

Former number	20	
Elected 1944	2	
Total	22	
Died 1944 1, 1945 2	3	
Present number		19

CORRESPONDING MEMBERS

Former number	10	
Elected 1944	3	
Elected 1945	4	
Total	17	
Died	1	
Present number		16

LIFE MEMBERS

Former number	87	
Fellows to life members 1944....	13	
Fellows to life members 1945....	13	
Total	113	
Died 1944 7, 1945 8	15	
Present number		98

FELLOWS

Former number	892	
Members to fellows 1944.....	44	
Members to fellows 1945.....	32	
Total	968	

Fellows to life members 1944....	13	
Fellows to life members 1945....	13	
Resigned 1945	3	
Dropped 1945	3	
Died 1944 14, 1945 12.....	26	
Total	58	
Present number		910

MEMBERS

Former number	1,788	
Associate to member, 1944.....	41	
Associate to member 1945.....	47	
Reinstatements 1944 1, 1945 2....	3	
Elected 1944	229	
Elected 1945	236	
Total	2,344	
Members to fellows 1944.....	44	
Members to fellows 1945.....	32	
Resigned 1944 3, 1945 6.....	9	
Dropped 1944 10, 1945 13.....	23	
Died 1944 10, 1945 15.....	25	
Total	133	
Present number		2,211

ASSOCIATE MEMBERS

Former number	315	
Elected 1944	73	
Elected 1945	90	
Total	478	
Associate to member 1944.....	41	
Associate to member 1945.....	47	
Resigned 1944	3	
Resigned 1945	1	
Dropped 1944	5	
Dropped 1945	1	
Died 1945	1	
Total	99	
Present number		379

TOTAL MEMBERSHIP

Honorary	19
Life Members	98
Corresponding members	16
Fellows	910
Members	2,211
Associate members	379
Total	3,633
Total membership April 1, 1946..	3,633
Total membership April 1, 1944..	3,112

WINFRED OVERHOLSER, M. D.,
Secretary.

REPORT OF THE EXECUTIVE ASSISTANT

Your Executive Assistant herewith submits his annual report: In addition to the financial statements, I should like to present the following facts:

The printing of the membership directory will come in September. The skipping of one year's directory was approved by the Executive Committee because of physicians returning from service requiring new addresses and to include two years of newly elected members.

Your office is in serious need of additional help and of additional office space. I, therefore, request approval of adding one additional employee not to exceed \$1,800.00 per year and authority to obtain new office space when and if possible.

Our JOURNAL has had its best year in terms of finances but consideration should be given to planning expansion of its services.

Our membership is growing rapidly resulting in more requests from committees for increased clerical service. The Committee on Membership will need more year round clerical service in order to keep abreast of an ever increasing number of new applications.

The dates of the meeting at the Hotel Pennsylvania in New York for 1947, will be May 19-23.

In closing, may I express appreciation of the devoted services of our Officers, Executive Committee, Council and Committees during the past two difficult years.

AUSTIN M. DAVIES.

COMMENT

THE NATIONAL MENTAL HEALTH ACT

The National Mental Health Act has brought mental illnesses, public provision for which has heretofore been almost entirely a state and local responsibility, within the purview of a national health problem. The medical profession and the public have, at last, become aware of the nature, varieties, and great prevalence of these illnesses, which had previously been neglected in medical education, general medical practice, and public health administration, and are now receiving widespread attention. The Act has been passed for the purpose of bringing to bear on the problem the resources of the national government.

In this review consideration is given to the provisions of the Act, and also to the explanation of the proposed program obtained from governmental and other authoritative sources. The Act is designed to bring into action a national mental health program, prepared by the U. S. Public Health Service and directed to (1) training of personnel, (2) research, and (3) improvement of mental health services. The administration is by the Surgeon General of the Public Health Service, assisted by an Advisory Council, consisting of the Surgeon General, chairman ex officio, and six members appointed by him from "leading medical or scientific authorities who are outstanding in the study, diagnosis, or treatment of psychiatric disorders." The Council are to advise and make recommendations in matters relating to the activities and functions of the Service in the field of mental health. They are authorized to review research projects and educational programs, and to recommend those they consider suitable for support; also to prepare and issue publications approved by the Surgeon General.

Participation of the Council in appointments in important positions such as Director of the Institute or of the program, is not provided by the Act.

Provision is made for a National Mental Health Institute, in or near the District of Columbia. Besides fully equipped laboratories, the Institute will contain a two hun-

dred bed hospital. Voluntary patients may be admitted, and patients transferred from St. Elizabeth's Hospital. The Institute will be manned by a full-time staff and fellows. It is also anticipated that teachers and other prominent scientists will come to the Institute "to pursue special problems and to study the latest findings and methods." The Surgeon General is also authorized to admit for training and instruction such persons as he may designate, and to pay them \$10.00 per diem; also, through grants, to provide aid, on the same terms, for such training and instruction in approved public and other non-profit institutions. These institutions may be aided in improving their teaching facilities and faculties; also in providing advanced education for teaching positions, refresher courses for practicing psychiatrists, and psychiatric training for general medical practitioners. Similar provision may be made for the training of non-medical personnel. Grants-in-aid may, upon request, be made to universities, hospitals, laboratories, and other public or private institutions, or to individuals for research projects recommended by the Council.

Grants-in-aid made to the states may be used for training personnel, for research, and for out-patient and other community services. Public Health Service personnel will, if requested, assist in setting up and improving training facilities and programs at the hospitals. Also demonstrations, described as "model projects" or "pilot plants," may be provided for the purpose of "establishing procedures and standards of care" in hospital and out-patient services. Although not prohibited by the Act, it is evident from references in discussions and committee reports, that Federal funds will not be used in providing hospital treatment for mentally ill patients, "other than those connected with teaching programs and research projects." The inadequacies of the present hospitals were strongly presented as an argument for the passage of the Act, and it was considered that "improvement in hospital treatment is another function of a public mental health

program." It was thought, however, that "this could be done through more competent professional care." There can be no doubt that training of personnel, where it can be provided and utilized in improving hospital service, will be of inestimable value. It seems doubtful, however, that the hospitals in which the need is greatest will be financially able to comply with the requirements for grants-in-aid, or to retain in the service those whose qualifications after training entitle them to advancement in position and compensation. At best, "competent professional care" has a discouraging and often hopeless task in hospitals which are structurally defective, unsanitary, poorly equipped, overcrowded, undermanned, and lacking in ordinary household conveniences and comforts. Added to this, in many places, are political considerations in appointments and administration, and obstructive, detrimental procedures and practices connected with the admission of patients. In some instances the standards are so low as to be a disgrace to our civilization, and, when the population of a state is financially unable to improve them, the only recourse would seem to be aid from the Federal Government.

The place in a comprehensive mental health program of the long established mental health provision made by the states did not apparently receive adequate consideration in the preparation of the Act and the program. In administration, in relations with the states, it would seem appropriate that cooperation should be both ways. The state mental hospitals are the outstanding mental health centers throughout the country. In some states there is no other. Their 600,000 and more patients are said to be "the central problem of psychiatry." Their physicians comprise a large proportion of the qualified psychiatrists of the country. It would seem appropriate, therefore, that the policy of the national mental health program should be directed to conserving, encouraging, cooperating with and utilizing the established mental health resources of the different states to the fullest extent. It seems particularly important that, in the administration of the program, much attention should be given to sound psychiatric direction. When, however, the Act was introduced in Congress, it

was provided that grants-in-aid made to the states would be expended in accordance with plans presented by the "State health authority." The Public Health Service, it is said, had "found that a psychiatric clinic connected with the health department can function effectively." The historic development of treatment of mental illnesses and the provision made by the states have, however, been separate and different from those for other forms of illness, and the state health authority is seldom responsible or qualified for administration of the service. In states in which there is a considerable number of hospitals, they are under the supervision or control of a central state authority. When, however, there is only one or a very few hospitals, central supervision or direction may be limited to economic considerations, and the superintendents of the hospitals are responsible for medical administration and direction. It has long been considered that the state hospital was the mental health center of the district which it served, and, as means were provided, the services of the hospitals have been extended into the communities by means of out-patient and social service and other community mental health activities. When, therefore, the situation was explained to the Congress, the designation "State health authority" in the Act was changed to "State mental health authority." This new term is defined in the Act as follows: "the State health authority, except that in the case of any state in which there is a single state agency, other than the state health authority, charged with the responsibility of administering the mental health program of the state, it means such other state agency." The committee of Congress to which the Bill was referred, explained in their report, however, that: "Your Committee does not contemplate by the new definition to include those agencies whose activities in the mental health field are restricted to jurisdiction over mental institutions and their patients." It is evident that this interpretation would mean that in states in which, owing to financial inability, the hospitals had been unable to extend their activities into the communities or, at most, were able to provide only out-patient and social service to patients on visit from the hospitals and still under their jurisdiction,

the planning and administering of grants-in-aid to the states would be the responsibility of the state health authority, who would in most instances be without the necessary qualifications and experience. This would create a new state mental health service separate from that of the hospitals, and contributing to their traditional isolation and ill repute, and prejudicing their further development. In consequence, the interpretation of the committee, and the procedure implied, were vigorously repudiated by Dr. Bowman, president of the American Psychiatric Association. It would seem better in such instances for the Governor of the State to designate a State Hospital Superintendent or other qualified psychiatrist to act as state mental health authority in the program of the U. S. Public Health Service.

The primary purpose of the national mental health program is prevention, and, in service to patients, particular attention will be given to early diagnosis and treatment by means of out-patient clinics. These clinics will in many, perhaps in most, instances be established with the aid of the Public Health Service and administered by the state or local mental health authorities. Important as improvement and expansion of out-patient services are, however, it would be a mistake to expect that they "should pay for themselves by reducing the amount of hospital care necessitated by mental disease." Some patients would, no doubt, be enabled thereby to shorten the period of hospitalization or to avoid it entirely. Many others, however, who now fail to receive needed hospital treatment would be discovered, and the number of admissions would be likely to increase. There will always be many cases in which no treatment obtainable from private practitioners or out-patient service will replace the organized treatment and measures for readjustment to home and family relationships which are provided by an adequate mental hospital. Even the present hospitals, notwithstanding their deplorable inadequacies, provide a far better service than is generally known, or represented in sensational descriptions in the public press and in fictional literature. The large majority of those employed in them are estimable, conscientious people who, in the face of most discourag-

ing conditions, are performing extremely delicate and difficult tasks with devotion and, in most instances, with remarkable capability. Consideration should be given to the return to their families and the communities, recovered or sufficiently improved, of half the patients admitted to the hospitals; also to the treatment to which many patients were subjected before their admission, or before hospitals for the mentally ill were established.

It is evidently intended that the national mental health program should be a cooperative rather than an independent undertaking. There is little that is mandatory in the Act. The Surgeon General of the Public Health Service, in his remarks at a hearing, said: "I am in agreement with the mental health authorities who see as a solution of these problems an over-all national mental health program, sponsored by the Federal Government—but requiring for its fulfillment the concentrated effort of state and local governments, and private institutions and individuals." This may be regarded as a challenge and a plea. The solution of mental health problems is a long-term undertaking and by no means simple. The assumption by the national government of participation in the problem on a national scale, in no degree diminishes the responsibilities of the state and local authorities. It continues to be the duty and privilege of the people of the states and the local communities to make adequate provision for the treatment of their mentally ill. No aid for this purpose should be necessary from the Federal Government, except for states in which the population is manifestly unable to bear the great expense. The passage of the National Mental Health Act emphasizes, however, the universally recognized need for a revision of the mental health policy and program of the states and their local subdivisions, and the accomplishment, without delay, of the much needed and long neglected improvement of the mental hospitals, and of the procedures and practices to which the mentally ill are subjected in obtaining access to them. This advancement is the most important contribution that could be made toward taking full advantage of the service to the mental health of the people of the country obtainable by cooperation in the

administration of the national mental health program. Only by making the hospitals more adequate can the antipathy of the public and the reluctance with which psychiatric service is accepted be overcome. Nor does experience indicate that the much needed psychiatric service, for which provision is made at some of the general hospitals, will relieve the necessity for the great public mental hospitals. Mental illnesses which require hospital treatment are, in most instances, protracted, and require longer periods and a more highly organized and extensive provision for treatment than can be properly undertaken by an urban general hospital. The enlightenment and support of the general public must be gained in order to improve the public provision for the mentally ill, and cooperation in the public education program contemplated by the Public Health Service provides means of accomplishing this.

The passage of the National Mental Health Act places a particular responsibility and opportunity before the well qualified psychiatrists of the country, individually and through their institutions and organizations. In relation to the expanding needs, the number of these psychiatrists is far too small. Their active interest and participation in the national mental health program, especially in its relations with the states and with educational and research undertakings, will contribute much to sound development. The very difficulties and problems which the national mental health program is designed to overcome will prove troublesome in obtaining the qualified personnel and favorable conditions needed for the inauguration and effective operation of the program. Nor does the record of the Federal Government in mental health administration indicate that, any more than the states, it can be depended upon to furnish model demonstrations and examples, or effective support to the administration of the program. This is illustrated by a recent reference to St. Elizabeth's Hospital in the *Journal of the American*

Medical Association. This hospital is outstanding for service and for educational and scientific activities, and is designated in the Mental Health Act as the hospital which will have close relations with the new National Mental Health Institute. According to the *Journal* reference, however, it is, by reason of a change in its administrative organization by which it is deprived of its board of trustees of which the Surgeons General of the Army, Navy, and Public Health Service, and prominent citizens of the District of Columbia, were members, in danger of being changed "from one of the nation's leading mental hospitals to just an ordinary county insane asylum." It should be realized also that the demand for psychiatric service is now so pressing that, in the present state of psychiatric education, psychiatry in general medical practice, and the understanding of mental illness and its treatment by the public, the temptation, and even the necessity in some instances, of accepting compromises and inferior standards is very great. It is also necessary to evaluate and discriminate among the paths along which psychiatric thought and practice are advancing. Psychiatry was formerly referred to as the Cinderella or stepchild of medicine. Now she is being given full status in the family circle. General medicine, however, seems reluctant to include with the stepchild, responsibility for the "central problem of psychiatry," and camouflages the identity of the child by means of new names and formulations. The psychiatrists of the country and their institutions and organizations, notably The American Psychiatric Association, can render a valuable service by participating and cooperating actively in the maintenance of sound psychiatric principles and standards, and in enabling the existing mental health agencies and their staffs to have the place in the national mental health program for which their great experience and organized resources eminently qualify them.

WM. L. RUSSELL, M. D.

"IT CAN'T HAPPEN HERE!"

The care of the mentally ill has from the beginning been considered a proper function of the state. Some states, to be sure, have

discharged this responsibility poorly; appropriations have been niggardly; and partisan politics has not infrequently outweighed the

welfare of the patients. The average has been none too high, and only a few states have been outstanding in enlightened and scientific dealing with mental illness in keeping with the practices of modern medicine.

There are those who have cried aloud for Federal aid and control, on the assumption that the Federal government is possessed not only of greater funds but of greater wisdom and a greater willingness to utilize medical advice on medical problems. Is the latter assumption valid? Recent developments in Washington warrant skepticism.

Saint Elizabeths Hospital, established by Dorothea Lynde Dix in 1855 for the care of psychiatric cases from the Army and Navy, has long been recognized as a leader in its field. Its standards of care have been high, and its civilian atmosphere has been an advantage in dealing with military patients, being reflected in a high recovery rate. During World War II, over 5600 Naval personnel passed through it as patients, a large majority being discharged as recovered.

In the Spring of 1945, the powerful Bureau of the Budget, as represented by one of its lesser luminaries, concluded, without medical advice, without consultation with either the Navy or the hospital, and solely by virtue of its own omniscience, that the institution should be reduced in size; the simplest way, it concluded, was to stop Naval admissions and have the ex-service patients removed. Letters were prepared for the President's signature, and signed and dispatched, instructing the Navy to send its patients elsewhere and directing the Federal Security Agency to arrange with the Veterans' Administration to have eligible servicemen removed to veterans' hospitals.

In a press interview shortly thereafter, The Director of the Budget is reported to have said, "We simply feel on the basis of what we know about the development of mental hospitals in this country that Saint Elizabeths cannot continue to increase indefinitely, and we feel it's plenty large enough." Asked where the Navy should care for its psychotics, he replied "We weren't concerned about that." Whether the Navy load would fall as the fighting ceased, whether the Naval patients would be as well or conveniently cared for, whether the radi-

cal change would be good or bad for the hospital—these considerations were of no moment. The budgeteers know all! Eminent experts called in by the Navy and by the Federal Security Agency advised against a change in policy, but the Budget decisions are like the laws of the Medes and Persians.

The step which might have been reversed so long as it remained a presidential "directive," was made more nearly irrevocable when the President embodied the change in Reorganization Plan Number Three on May 16. The American Psychiatric Association, through its Council, officially opposed the change, and Drs. Whitehorn and Chapman presented to the Committees of the House and Senate strong reasons why the legislation should not be enacted. The House, indeed, thanks largely to a physician member, Dr. Walter Judd of Minneapolis, overwhelmingly voted down the proposal; but the Senate, despite Senator Ferguson's strong opposition, passed the Plan by a margin of only seven votes. As the veto of both houses was necessary to prevent passage, the plan became law. The Navy will hereafter use the Public Health Service Hospital at Fort Worth, Texas, reimbursing the Public Health Service at a rate slightly more than twice the 1946 per capita rate of Saint Elizabeths Hospital.

The point at issue is not primarily whether the Navy patients will be better, or as well, cared for at Fort Worth. That hospital, located several miles from the city and far from medical centers, was planned for non-psychotic drug addicts, and it is relatively inaccessible except by air to either the west or east coast. The Navy group, too, will not have the benefit of association with civilian patients or with the traditions of an institution which for nearly a century has dealt with military and civilian psychotics in a more than satisfactory way. The most serious aspect of the situation is the readiness of the Federal government, through a non-medical bureau, and without even medical advice, to make a radical change in medical procedures without consultation with the medical authorities involved and without primary regard for the welfare of the mentally ill wards of the government.

It can happen here!

NEWS AND NOTES

THE PROGRAM FOR THE 1947 MEETING

This statement by the Committee on Program is addressed to *all the members* of our Association regardless of whether they wish to be represented on the program or are, at present, certain of attending the meeting. The committee hopes most sincerely that the present statement will actually be read by all the members. Each year at about this time, the committee issues a statement which is published in the JOURNAL. Just what the fate of these statements ultimately turns out to be and to what extent they reach the membership is something that we have no way of estimating. Judging by the inquiries that the chairman has received in previous years long after the statements were published, it would seem that a large proportion of the members has not even been aware of the fact that such a statement has been published. It is different this year, and we wish to stress the fact that all the members must be acquainted with the plans that the Program Committee is organizing this year. Most of you will remember that on Wednesday of the 1946 meeting at a session arranged for the whole Association, the question of more active participation by the membership at large was taken up; and the Program Committee was instructed to cooperate with the special Re-organization Committee in attempting to make such general participation possible. Earlier this fall a meeting was held between representatives of the Program Committee and of the special committee, and a tentative plan was worked out which is to be presented to the Program Committee as a whole when it meets in Mid-December and then to the Council for their approval. This plan calls for extending the duration of the 1947 meeting to 5 whole days. One day and a half of this period will be set aside for meetings in which the entire membership will participate. We wish to emphasize the term "participate" for the subjects to be discussed will be those in which all members are interested; and in order to reach conclusions that are actually represen-

tative of the needs and attitudes of our members, it is of the utmost importance that all of you have an opportunity to express your views on these subjects. Such matters as public relationships, medical education, personal interrelationships, hospital administration, social and legal aspects of psychiatry, and so forth, should be freely discussed, not on the basis of presentations of papers by a few selected speakers, but through a general discussion from the floor. Whatever conclusions will be reached at that time should actually represent the opinions of the majority and not isolated ideas of a few members.

The rest of the time will be given over to the usual proceedings of the Association, a major portion of the time being taken up by the presentation of scientific material. Obviously, this will afford somewhat less time than usual for the scientific papers and, therefore, the committee urges very seriously that all those members who wish to submit scientific papers be sure to send in their abstracts to the chairman or any other member of the Program Committee as soon as possible and *before the first of December*. We will, of course, decide on the presentation of the papers both on the basis of the importance of the material presented and the timeliness of the subject discussed. We can all agree that at the present time certain subjects stand out as of particular importance to the Association and society in general. The problem of extramural and particularly out-patient psychiatry, the subject of veteran rehabilitation, the rôle that psychiatry should play in medical education, the present day status of certain therapeutic procedures, and research investigations into the causes and nature of personality disturbances are just a few examples of the type of material that should be given priority at this meeting.

At the Mid-December meeting of the Program Committee, we should have most of the requests for presentation of papers so that

we can come to a preliminary decision as to the composition of the program. Some few papers may be accepted after that if there is a place on the program, but chances are that such places will not be too numerous. The abstracts that we wish to have at this time need not be final. On the other hand, they must be fairly representative of the general trend of the paper so as to afford the Program Committee a good basis for evaluating the paper. The abstract should consist of one to two typewritten pages and need not include exact results or conclusions. Directly after the meeting, the chairman of the Program Committee will communicate with the authors of the papers concerning the decision that has been reached by the committee.

WILLIAM MALAMUD, M. D.,
Chairman, Program Committee.

RESIDENCY IN NEUROPSYCHIATRY, VETERANS ADMINISTRATION, LOS ANGELES.—The resident training program in neuropsychiatry at the Veterans Administration Center began August 15, 1946. The program is designed to prepare the resident for the examination of the American Board of Psychiatry and Neurology. Faculty members of the medical schools of University of Southern California and College of Medical Evangelists are participating and the program includes courses in psychopathology, clinical psychiatry, neuropathology and clinical neurology, together with staff conferences and ward rounds with consultants.

Vacancies are available for veterans who desire specialized training in neuropsychiatry. Address all inquiries to Dr. Samuel D. Ingham, Chairman of the Deans' Subcommittee on Neuropsychiatry, 727 West Seventh Street, Los Angeles 14, California; or to the Director of Clinical Psychiatry, Neuropsychiatric Hospital, Veterans Administration Center, Los Angeles 25, California.

NORTH PACIFIC SOCIETY OF NEUROLOGY AND PSYCHIATRY.—The annual meeting of the Society was held in Portland, Oregon, September 20-21, 1946. The scientific program was divided into two sessions on both days. The second day the entire group

motored to Timberline Lodge on Mt. Hood. There, following the scientific sessions, a very enjoyable social evening was spent. There were two highlights of the meeting: first, a panel discussion on "Recent Advances in the Convulsive Disorders"; second, a paper by Dr. Kenneth Swan, professor of ophthalmology at the University of Oregon Medical School, on "Contemporary Concepts of Papilledema."

Officers for the coming year are: President, Dr. Ralph M. Stolzheise, Seattle, Washington; Vice-President, Dr. Frank Turnbull, Vancouver, B. C.; Secretary-Treasurer, Dr. Herman A. Dickel, Portland, Oregon. The three members of the Executive Committee are: Dr. H. Ryle Lewis of Spokane, Washington; Dr. Gordon Hutton, Vancouver, B. C.; Dr. Merle Margason of Portland, Oregon.

The next meeting of the Society will be in Seattle late in March, 1947.

NEWS LETTER.—President Hamilton draws the attention of the membership to the fact that the Executive Committee has under immediate consideration a subject that was raised at the last meeting of the Association, namely the publication of a news letter in addition to the JOURNAL. Comments from our membership to any of the five committeemen at this moment will be most timely, and most welcome.

PENNSYLVANIA PSYCHIATRIC SOCIETY.—At the eighth annual dinner meeting of the Pennsylvania Psychiatric Society which took place at The Barclay, in Philadelphia, October 10, 1946, former U. S. Supreme Court Justice Owen J. Roberts spoke on "What the Layman Can Do About Mental Illness."

The following officers were elected to serve for the year 1946-1947: President, Charles H. Henninger, M. D., Pittsburgh; President-Elect, LeRoy M. A. Maeder, M. D., Philadelphia; Secretary-Treasurer, Philip Q. Roche, M. D., Philadelphia.

Councillors—For two years: Samuel B. Hadden, M. D., Philadelphia; Harold L. Mitchell, M. D., Pittsburgh; Howard K. Petry, M. D., Harrisburg. For one year:

Bernard J. Alpers, M. D., Philadelphia; Kenneth E. Appel, M. D., Philadelphia; Thomas A. Rutherford, M. D., Waymart; Cornelius C. Wholey, M. D., Pittsburgh.

Auditors—For three years: Elmer V. Eyman, M. D., Philadelphia. For two years: Robert J. Phifer, M. D., Woodville. For one year: Harry F. Hoffman, M. D., Allentown.

THE HELEN PUTNAM FELLOWSHIP FOR ADVANCED RESEARCH IN GENETICS OR MENTAL HEALTH.—Radcliffe College, Cambridge, Mass., invites applications for this fellowship. The Committee on Award would be interested in receiving nominations immediately from eligible women scholars who have research in progress in the field of genetics or of mental health, broadly defined.

The fellowship will pay a stipend of \$2,000 for a term of eleven months from October 1, 1947, with the possibility of a renewal for a similar period. All normal laboratory facilities will be provided to the holder and each fellow will be assigned room and board (at cost) in one of the Radcliffe graduate houses and will be expected to be in residence during the tenure of the fellowship.

In general, the committee will limit its choice to mature women scholars who have gained their doctorate or who possess equivalent qualifications. Appointments will be limited to those candidates who can submit a plan of research that is already under way and proofs of progress may be required by the committee.

Applications for the award should be submitted to Radcliffe College not later than April 1, 1947, and the announcement of the appointment to the fellowship will be made on or about May 1, 1947. Application forms may be secured by addressing: Committee on the Helen Putnam Fellowship for Advanced Research, Radcliffe College, Cambridge 38, Massachusetts.

THE CENTRAL NEUROPSYCHIATRIC ASSOCIATION.—The 25th anniversary meeting of the Central Neuropsychiatric Association was held in Denver, October 4 and 5, 1946. The programs of the Association have always been limited to presentations by the members in the host city, and an excellent scientific

program was presented by the Denver and Colorado members and their colleagues.

The next meeting will be held in Galveston in October 1947. Officers elected for the coming year are: Dr. Clarence E. Van Epps, Iowa City, President; Dr. Jack R. Ewalt, Galveston, Vice-president; Dr. William C. Menninger, Topeka, Secretary-Treasurer; and Dr. A. E. Bennett, Omaha, Counselor.

LOS ANGELES PSYCHIATRIC SERVICE.—Applications are being received for the post of psychiatric-director for an adult community mental hygiene clinic. Applicant must be a diplomate in psychiatry and have administrative experience. Salary is in accordance with qualifications. For further information, apply to the Director, Los Angeles Psychiatric Service, 507 South Westlake Avenue, Los Angeles 5, Calif.

SCHOOL PSYCHOLOGIST, NEW YORK CITY.—Applications are being received for the position of school psychologist New York City, and must be filed before February 6, 1947. The week of February 24, 1947, has been set aside for written tests and applicants must meet the eligibility requirements unless entitled to an extension under the Military Leave Regulations of the Board of Education before September 8, 1947.

Application fee is \$4.25; salary \$2,398 to \$4,654 by 14 annual increments conditioned upon satisfactory service. At the present time there is also a cost-of-living bonus of \$350 per annum. Additional information will be supplied by Mr. Joseph Jabionower, Chairman, Committee on Licenses in Child Guidance, Board of Education, 110 Livingston Street, Brooklyn 2, N. Y.

SEVENTH CONFERENCE ON SCIENCE, PHILOSOPHY AND RELIGION.—The 1946 conference was held at the University of Chicago, September 9-11, 1946. About 60 papers were presented during the meetings, and as in previous years these papers will be published later in the annual volume.

The permanent headquarters of the conference is at 3080 Broadway, New York 27, New York.

SOUTHERN PSYCHIATRIC ASSOCIATION.—The annual meeting of the Southern Psychiatric Association was held at the Jefferson Hotel, Richmond, Virginia, October 7-8, 1946. On the first day, morning, afternoon and evening sessions were held, and on the second day, morning and afternoon sessions.

The excellent record of this society, an affiliate of The American Psychiatric Association, has been due in large part to the interest and activity of its organizer, Secretary-Treasurer Newdigate M. Owensby of Atlanta.

INSTITUTE OF GENERAL SEMANTICS, NEW HEADQUARTERS.—The Institute announces that it has established new headquarters at Lakeville, Connecticut, and that the eighth annual winter seminar will be conducted at that place December 27, 1946 to January 2, 1947.

This removal from Chicago was made necessary by the housing and hotel shortages in that city which made it difficult for students attending training courses to find living accommodation. While the new location is temporary, it is possible that it may become the permanent home of the Institute.

CONGRESS OF CORRECTION, DETROIT, 1946.—The seventy-sixth annual meeting of the American Prison Association was held at the Hotel Statler, Detroit, October 4-8, 1946. Representatives of the principal American prisons were in attendance as well as two from Puerto Rico and three from the Canadian penitentiary system. General meetings were held in the mornings and evenings and sectional meetings in the afternoons. Every aspect of the prison problem seemed to be well covered with the exception of the psychiatric which was represented by only two papers, one by Dr. H. C. Solomon on "Understanding the Psychopath" and one by Dr. R. H. Felix on "Mental Health Approach to Juvenile Delinquency." Outstanding personalities at the congress were Edward R. Cass and Austin McCormack of New York, Sanford Bates of New Jersey, James V. Bennett of the Federal Prison System, Garrett Heyns of Michigan and Prof. W. C. Reckless of Ohio State University and Prof. A. E. Wood of the Uni-

versity of Michigan. From a psychiatric standpoint, the most interesting session was that held on Tuesday afternoon, October 8, consisting of a symposium on "Psychiatry and the Law" during which representative lawyers and some psychiatrists outlined their various view-points. It was a bit of a disappointment to a prison psychiatrist not to hear any contributions or discussions on criminal psychiatry from men like Freedman or Pescor. Generally speaking, however, the papers presented at the congress were interesting and instructive. In the opinion of this reviewer the two finest addresses were given by Judge William B. McKesson of California on "New Agencies for Treating Youth Offenders" and Warden James A. Johnston of Alcatraz Penitentiary, on "Problems at a Maximum Security Institution."

CANADIAN PENAL CONGRESS, WINDSOR, 1946.—The fourth annual meeting of the Canadian Penal Association was held at the Prince Edward Hotel, Windsor, Ontario, October 6-9, 1946. It was presided over by Major J. A. Edmison, K. C., executive secretary of the Prisoners' Rehabilitation Association. At this meeting the recently appointed Commissioner of Canadian Penitentiaries, Major-General R. B. Gibson outlined his ideas of penitentiary administration. The English Borstal System for young offenders was described by Rev. R. G. Burgoyne; penitentiary personnel by Prof. C. W. Topping of the University of British Columbia; juvenile court procedure by Judge F. A. E. Hamilton of Winnipeg; and provincial jails and adult reformatories by Dr. Harry M. Cassidy and Dr. Jaffray of the University of Toronto. Prison chaplain problems were outlined by Rev. R. G. Forneret of St. Vincent de Paul Penitentiary, Montreal and Rev. E. J. Tucker of Toronto. The special address at the congress dinner on Monday October 7, was delivered by Dr. B. K. Sandwell, editor of "Saturday Night."

THE ROCKEFELLER FOUNDATION ANNUAL REPORT, 1945.—In his report as director of the medical sciences, Dr. Alan Gregg says: "It is surprising that it has taken so long to recognize that the structure of man's per-

sonality is no more indestructible than his obviously fragile body. Now that this recognition has made possible a really scientific approach to the problem of human relations, it seems more than ever wise to continue support for psychiatry."

Total appropriations of the Foundation during 1945 were \$11,330,689. Total appropriations for the medical sciences were \$1,751,850.

Support of psychiatry by the Rockefeller Foundation was represented by grants during the years as follows:

1. Washington University (neurophysiology)	\$ 40,000
2. Karolinski Institute (neurophysiology)	45,000
3. University of Edinburgh (neurosurgery, neurology, psychiatry)	20,750
4. Harvard Medical School (psychiatry)	112,000
5. University of Tennessee (psychiatry)	15,000
6. Vanderbilt University School of Medicine (psychiatry)	15,000
7. University of Illinois (psychiatry)	115,000
8. American Psychiatric Association (psychiatric nursing)	32,000
9. Columbia University (psychiatry)	24,000

These grants, running for periods ranging from 1 to 4½ years, total.....\$418,750

MENTAL HYGIENE APPOINTMENTS, OHIO.—The division of mental hygiene, Department of Public Welfare, Ohio, announces three recent appointments. Dr. Mark W. Garry, formerly director of the tuberculosis division in the Ohio Department of Health, becomes Chief of Tuberculosis and Internal Medicine in which capacity he will be in charge of tuberculosis control and treatment in the institutions and will be responsible for organizing the medical program in mental hospitals.

Miss Anna T. Lownie, M. A., R. N., has been appointed Chief of Nursing Service and Education. Prior to joining the Ohio staff, Miss Lownie was director of nursing and of the Post-graduate School of Psychiatric Nursing at Menninger Sanitarium, Topeka.

Wallace C. Fotheringham, M. A., who was a professor at Muskingham College, Ohio, has been appointed Chief of Institutional Personnel Training, and his major responsibility is the organization of training courses

for psychiatric aides in the institutions of the division of mental hygiene.

PRIZE CONTEST.—The Institute for Religious and Social Studies is offering a first prize of \$2,500 for a manuscript of between 40,000 and 70,000 words dealing with situations involving problems of group adjustment growing out of those tensions which may arise from differences of race, religion, nationality or socio-economic interests. The author of the second best manuscript will be awarded \$500. The closing date of the contest will be October 31, 1947. For further information write to the Institute for Religious and Social Studies Prize Contest, 3080 Broadway, New York 27, N. Y.

LASKER AWARDS, 1946.—At the annual meeting of the National Committee for Mental Hygiene held in New York on October 31, 1946, Dr. James R. Angell conferred a Lasker Award on Dr. W. Horsley Gantt, Johns Hopkins School of Medicine, Baltimore, for experimental investigation into behavior deviation. Dr. Jules Masserman, division of psychiatry, University of Chicago, received honorable mention. Rev. D. R. Sharpe, President, Ohio Mental Hygiene Association, and Walter Lerch, reporter on the Cleveland Press, were recipients of a joint award conferred by Dr. Samuel W. Hamilton for their efforts to improve hospital care for mental patients. Albert Deutsch, feature writer on P. M., received honorable mention.

AMERICAN PHYSICIANS' LITERARY GUILD AWARD.—At the meeting of the American Medical Association in San Francisco in July 1946, was formed the American Physicians' Literary Guild, one purpose of which is to recognize outstanding literary contributions by members of the medical profession.

The first prize authorized by the Guild has been awarded to Dr. James A. Brussell, assistant director Willard (N. Y.) State Hospital, for his novel "Buried by Beans." Dr. Brussell also received the Guild's second and third prizes for his short stories, "Time for Marvin" and "College Rackets."

Dr. Brussell has been active in the New York State hospital service for the past

15 years and served overseas during the recent war.

LECTURES ON MENTAL HYGIENE, PHILADELPHIA.—The mental hygiene committee of the Philadelphia County Medical Society conducted a third series of lectures

open to the public on the mental hygiene of childhood, adolescence, family and school relationships. The series consisted of 7 weekly lectures, commencing November 4, 1946. As an instrument of public education these lectures have proved very useful and have been exceptionally well attended.

BOOK REVIEWS

THE NEUROLOGIST'S POINT OF VIEW. By I. S. Wechsler, M. D. (New York: L. B. Fischer, 1946.)

This book is difficult to review partly because of its wide range of subject, but partly also because one finds in it, in many matters, a sense of indecision. This lack of sureness seems to emerge perhaps because the author has not quite determined on his mode of attack: will it be sociological, historical, neurological, or should these clearer roads be made less passable by being blocked by Freudian neologisms, in order thereby to become psychiatrically more respectable and up-to-date thoroughfares? The essay on "nervousness and the Jew" is a case in point. Here is a sound examination of the many factors which have built the Jewish character, and produced naturally enough therein a paranoid trend, a sense of suspicion of motives, an apprehension of danger, an unexpected aggressiveness rooted often in insecurity. Majority pressure has made for a sharpening of the sharp Jewish mind and has stimulated his genius for industry and learning to the point whereby he becomes sourly regarded by his non-Jewish competitors. In wartime the same sense of urgency is *vis a tergo* to the rest of mankind, but for the Jew, in constant minority, there exists forever a sort of war, urging him forward to the limit of his physical and mental powers. The author speaks of "family closeness" also as an agent productive of individual nervousness, and certainly the matriarchal authority must often retard the maturing processes in the oncoming generation, but little is said of the effect of inbreeding which in every segregated community of which we know gives rise to disabling nervous sensitiveness and instability.

The rôle played by religious ritual in draining away unhappiness out of which obsessions might crystallize, is excellently described and phrased but the statement that "in the Jew 'realism' is exalted to the reduction of the 'ideal'" is not easily understood especially when regarded through the author's words that the Jew "has never really come to accept Death"—surely the most redoubtable and tangibly real fact of Life. Perhaps as a race they have been schooled never to take "no" for an answer; if there be no way through, there must be a way round,—even Death! But is not this very refusal a nervous straining after an ideal, a fantasy power, which in them is in this book deprecated. And a reviewer might be allowed to remember the "God-intoxicated" Spinoza, the poetry of Job and St. John, the divine afflatus of Isaiah and Ezekiel, the stubborn idealism of Saul of Tarsus, and the overwhelming personality of The Ideal Man. As has been already suggested this chapter is less happy when the straighter avenues are deserted for the more involved and circuitous bypaths of psychoanalytic theorizing. These lead to no clear goal

of explanation, and treading them in search of understanding the causes of anti-Semitism leads merely to the author's conclusion "that anti-Semitism is a world-neurosis," a jejune assertion indeed which would explain something not understood by something entirely un-understandable.

Indeed throughout the book one finds the author constantly taking away with one hand, what he has given with the other, statements of strength followed by demurrer. We are told that "much that passes for modern psychology and psychiatry will turn out to be plain gibberish." Yet Sigmund Freud "created a rich vocabulary, almost a whole language; . . . if Freud had done nothing but contribute a rich language, psychiatry would have reason to be very grateful to him." Now the obscurity of much modern psychiatric writing is rooted in this invention of new terms for old ideas, and such inventions are not to be found only in Freudian literature; they buttressed phrenology for 75 years in the last century, which then of fine repute proved to be the misdirected offspring of Gall, another man of distinguished and powerful imagination.

Today the Bar Associations are courageously attacking the hydra of lawyers' jargon which like all such growths are really weapons in a conspiracy against the public, a secret and priestly tongue. Alfred North Whitehead is the most profound thinker in our language, admittedly the richest tongue ever known; his ideas make stiff thinking but his words easy reading. Voltaire, Janet, Locke, Berkeley and Hume succeeded in being deeply intelligible in their own languages—and even Plato spoke Greek.

There is here, however, a good appraisal of Freud, as an observer, an innovator with a poet's gift of fantasy, though the reviewer would not agree that the "finest concept evolved by him is that of sublimation," but would direct attention rather to Freud's demonstration of the phylogeny of personality, to his discovery of the developmental stratification of the emotional life. This unifying contribution to anthropology and sociology illuminates psychiatric material and gives intelligible reasons for dynamic drives apparently unreasonable, such as compulsions and phobias and the sneaking beliefs or hopes of "magic" which all of us latently or blatantly harbour.

The most rewarding essay in this interesting and stimulating book is that entitled "The Problem of mental disorders—the neurologist's point of view." This is written in wise balance and is earnest, eloquent and clear. Possibly its optimism would be heightened had the author been able then to indicate what we know now of hypothalamic function in the control of not only metabolic and autonomic rhythm, but of its control of emotional rhythm as well. This essay was written twelve

years ago before the introduction of so-called "shock" therapy, with all its implications of the balance in unstable equilibrium of the pressor and depressor streams of energy. However, the author is seen to look from Pisgah to the land of promise, and is contemporaneous by his prophetic adumbration. Perhaps less happy is his description of Behaviorism as "the lusty offspring of" . . . the work . . . "of Pavloff." The author would, I am sure, be the first to agree that that sect is today but a memory, hard to recall. However, this book shows well and amply the many coloured rays glancing off "the bright shield of expectation" which psychiatry carries; it does this the more convincingly perhaps if often the author seems here and there to contradict his own opinions;—our present embryonic state is by this very fact made clearer and deeper and by a subtle ironic humour which savours all his writing.

The Essays on Moses, and on Maimonides the Physician, are models of acute interesting writing, and the reviewer can from his own observation endorse the fine picture drawn of colonization in Palestine.

Medicine has always been called a Learned Profession. Much of our writing has made us appear more like a union of slick gadgeteers. Here is a book to help retrieve our good name, for it is wise, erudite, humorous, and interesting; it was Whitehead who has pointed out that the most important quality of any proposition is not that it must be true, but that it must be interesting and exciting.

FOSTER KENNEDY, M.D.
New York.

A PSYCHIATRIC PRIMER FOR THE VETERAN'S FAMILY AND FRIENDS. By *Alexander G. Dumas, M.D.* and *Grace Keen*. (Minneapolis: The University of Minnesota Press, 1945.)

This book is written for a lay audience and gives an unusually sympathetic and helpful picture of the many adjustments that must be made by the physically and psychiatrically disabled veteran. It is presented as a story of five women, the problems they face and to which they adjust upon the return of their men. Three large categories of veterans are considered: the uninjured, the physically handicapped and the psychiatrically disabled. Wide clinical data are drawn into the manuscript by way of ample illustration of types of handicaps. The material on the physically handicapped is particularly well presented and contains valuable advice as to the psychological handling of such disabled individuals. The material on the psychoneuroses is well presented for a lay audience but might have contained somewhat more dynamic interpretation. The main handicap of the book is that much of the subject matter is presented categorically with little documentation as to its source. This gives a somewhat novelistic quality to a manuscript which is otherwise excellent and which should find a large audience.

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EMOTIONAL PROBLEMS OF LIVING (Avoiding the Neurotic Pattern). By *O. Spurgeon English, M.D.*, and *Gerald H. J. Pearson, M.C.* (New York: W. W. Norton & Company, Inc., 1945.)

This book has been written with painstaking care to see that all points are thoroughly elaborated and well illustrated by excellent and relevant case material. It is concerned with the promotion and maintenance of emotional health and balance at all age levels. It is psychoanalytic and the authors have succeeded in making the text readable and understandable. It should be the answer to laymen, medical students, physicians and all others who are interested in understanding more fully what is meant by dynamic psychiatry and what psychoanalytic teaching has contributed to modern psychiatry. The physician and pediatrician may see what constitutes the average or normal psychosexual development of the individual. The various levels of libidinous development are presented in detail to show that reasonable gratification and a feeling of security at each level must be achieved before the individual can successfully grow and progress. Practical suggestions to assist the parents and the growing personality are given. The problems of adolescence, work, and marriage are dealt with in a common-sense fashion. The mental hygiene of adult life including retirement and reaction to advancing years are presented. The final chapter on treatment is a concise review of the modern methods of reeducation and psychotherapy. The book is recommended to all students of medicine and psychiatry.

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THE CLINICAL APPLICATION OF THE RORSCHACH TEST. Second Edition. By *Ruth Bochner* and *Florence Halpern*. (New York: Grune & Stratton, 1945.)

This is a second edition of the book which was reviewed in the 1942 issue of this JOURNAL. Chapters have been added with Rorschach records of alcoholics and individuals who fit into the broad category of "behavior problems." The other chapters also have been filled out with many new records. The book continues to be a brief, easily understandable introduction to the clinical use of the Rorschach method of personality evaluation.

The introductory chapters are little changed from the previous edition. They cover a description of the technique and provide practical information for the use of the test. A table of samples of good and poor form perception is not included, nor is there a list of common and rare details, although reference is made to where these may be obtained. These are unfortunate omissions, as they are needed, particularly by beginners, for practical work with the test.

The variety of records chosen to illustrate those obtained in health and mental disorder is quite rich, although some records, particularly among the normals and "organic" cases, seem poorly chosen.

However, they should be helpful in demonstrating how the test factors are pooled to obtain a picture of the personality. The interpretations are usually short and tend to be superficial, and the accompanying case histories seem particularly inadequate. No improvements have been made in this regard in the second edition, and consequently the book cannot lead to any deep appreciation of the Rorschach technique, nor is it adequate for advanced work. The addition of new material, however, helps to increase its value as an elementary introduction to Rorschach testing.

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YOUNG MAN, YOU ARE NORMAL. Findings from a Study of Students. By *Earnest Hooton*. (New York: G. P. Putnam's Sons, 1945.)

The concept of normality in medicine in general, in biology and in psychiatry in particular, is a difficult though important one; Dr. Hooton acts as ghost writer for the staff of the "Grant Study" of the department of hygiene of Harvard University that undertook to study a sample of 268 normal young men. He describes its labors of 6 years in his well-known, easy going, unassuming fashion, and presents this complex score of materials in a predigested, and yet most appetizing style. It is practically as interesting as a detective story, and the style is somewhat reminiscent of P. G. Wodehouse.

The introduction is concerned with the problem of selection of the normals and the criteria observed. Initial rough screening was done by aptitude tests, medical examination and opinions of the deans. The sophomore boys who participated gave about 20 hours of their time to examinations, tests and interviews. The Study, headed by Dr. Arlie V. Bock, Professor of Hygiene at Harvard University, and supplemented by an internist, and anthropologist, a psychologist, a psychiatrist, a social worker and a few others, had as an immediate goal the description of the average normal young man.

The first part of the book is specifically dedicated to a description of this sample of normal man, hereafter referred to as the "Grantee," to borrow Dr. Hooton's term. The main significant datum on physical characteristics was that normal boys include mostly individuals of the "athletic" build. Another section in the first part discusses the social and economic background of the sample. For instance, the "Grantees" come, on the whole, from families that have a larger number of children than is the case with an unselected freshmen group. They also came from families with better incomes. Their intelligence was studied by Dr. Frederick L. Wells, one of the deans of American clinical psychology, using a rather heavy, though unorthodox battery of psychometric tests, including the Army Alpha, the Rorschach, and even such things as vocational interest inventories. In all, the "Grantees" do not differ greatly from the average college group, except from the very im-

portant finding that, in every test, except mathematical attainments, the "Grantees" are less variable than an unselected control group. The psychiatrists choose the trait approach for the description of the personalities. They speak, first, of well integrated, incompletely integrated, and over-integrated personalities. Then, a second category of traits is labeled "affect," which is subdivided into vital, bland and sensitive. In the first group they include men who display spontaneous force and energy. The bland group is colorless and neutral, and the sensitive ones are subtle in their thinking, incline to æstheticism, which may manifest itself as shyness in social behavior. Other traits are listed as "unstable autonomic functions," a-social behavior, positive traits, etcetera.

All the boys were placed into three groups, according to their "soundness rating," namely: in Group A, boys who were thoroughly sound; in Group B, those whose personalities seemed to exhibit many of the flaws; and in Group C, those definitely handicapped by some weakness of personality. The only trait that correlated significantly with this "soundness classification," was that of integration. Eighty-three percent in Group A were found to be well-integrated, while 44 percent in Group B, and 52 percent in Group C were incompletely integrated.

In all, it is very difficult to evaluate this part of the study, and even Dr. Hooton fails to make it quite clear to the reader. For reasons not easy to see, we find in the data comforting evidence for his favorite bias that there is little or no relationship between trait complexes and socio-economic factors of the individual's background, but a strong association between his physical characteristics and such personality traits. After having read and re-read the chapter on the trait approach, one wonders if much could not have been improved if more attention had been paid to what the Grant Study's neighbor, Dr. Gordon W. Allport, has to say about traits.

The next chapter, on the tastes and activities of the "Grantees," brings out such interesting data as that about 23 percent of them attend church regularly, and about 4.5 percent deny any affiliation. A study of the ways and problems of the Grant boys reveals that in 43 percent of them difficulties in social adjustment were found; in 1 out of 4, difficulties in family adjustments; and in 23 percent sexual problems. One wonders just where occupational problems would come in in a study of average groups of adults.

The second part of the book is concerned with the variety of components in normal youth. Dr. Hooton discusses first, problems of physique, sickness and health in inter-relationship. While Sheldon's somatotypes seem to have been the general background for the anthropometric studies, Dr. Seltzer decided to focus his study of inter-relationships mostly upon strengths or weakness in the masculine components; the most significant finding seems to be that normalcy and integration go clearly with "strong masculine components." However, the difference is not clearly statistically sig-

nificant or, at least, it needs careful analysis. A later chapter on the relationships between personality, physiology, and health brings forth a whole variety of interesting, thought-provoking and sometimes puzzling results, ranging from such things as relationship between soundness classification and physical fitness, blood groupings, pulse rates, etcetera. It is particularly intriguing to find that, for instance, the so-called "*sound boys*" were considerably less variable in the bloodsugar chances than the members of the two other classes in reaction to an injection of insulin. This becomes particularly interesting in view of the fact that almost the only thing that can be said definitely about bloodsugar levels of schizophrenics, for instance, is that there is a greater variability than normal.

The chapter on interrelationship between personality, background, and social capacity is based mostly on data obtained by a thorough check on the social background of the Grantees. Miss Gregory, the social investigator, visited all the homes, regardless of how far away they were, interviewed the parents, and appraised the family situation. In all, it seems that the basic personality group seems to be more reasonably related to the character of the parent's marriage than anything else, but the more specialized individual traits seem to be independent of this particular home factor. However, again the statistics do not seem to show significant difference. Then follow chapters on personality, intelligence, social backgrounds, and on differentiation by religious affiliation, all containing data difficult to interpret. To these belong such findings as that the Jewish subgroup is considerably more mesomorphic than the total series; or that the Catholic subseries exceeds the total series in soundness rating, is strong in vital affect, mood fluctuation, and includes well integrated, basic personalities, in performance on Alpha verbal tests.

The third part of the book is concerned with conclusions and speculations, and discusses the course of the "Grantee" in the years following the study in relation to wartime problems. One of the most hopeful results seems to be that the ability of the man to adjust himself, could, to a considerable degree, be predicted from the per-

sonality traits manifested while in college. The final chapter is concerned with a discussion of different types of normal young men, and a general appraisal of the achievement of the study. One can only heartily agree with Dr. Hooton that while much remains problematic, the Grant study has been remarkably successful in its primary object to describe personalities, physiques, and behaviors of a group of normal young men.

To the reviewer, two things seem to be particularly outstanding. One is the general impression that one of the most reliable differences between "normals" and "abnormals" which can be found is the fact that abnormals tend to show a greater variability, by almost any measure one may choose, as compared to normals. This study shows this to be true for variability in intelligence scores, in breathing, insulin tolerance and body build, for example.

The Grant study adds a modern, very important, chapter to the general problem of normality. Much of the work is thought provoking, but speculative and frequently statistically insignificant. However, in all it must be happily stated that it seems to prove that now experts in human engineering are able to select "normal" people, can describe them and understand them in meaningful, well-defined terms; they are able to differentiate groups within the normal group in a way that in turn may have a bearing on the distinctly pathological groups. Furthermore, and most important, on the basis of the data obtained, they are able to make reliable predictions or prognosis.

The results are encouraging enough to suggest that similar studies with similar methods should be applied to even larger groups, possibly as routine procedure in a college, to validate and increase the knowledge gained so far.

Dr. Hooton deserves great credit for rendering an account of a most complex, difficult and important study; it is his particular gift to make this book easy, pleasant and most stimulating reading. It is recommended to all concerned with problems of homo sapiens.

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IN MEMORIAM

NORMAN GRANT TUFFORD

1896-1946

In the passing of Dr. Norman Grant Tufford, August 10th, 1946, in Eskilstuna, Sweden, our Detroit community has lost a fine man, a friendly man. "Norm" is held in affectionate regard by all of us who have known him. His sincere pursuit of the truth and his sustained interest in human betterment have endeared him to us. A humanely independent thinker, his capacity to give freely of his attention and interest has been a source of strength to all who have worked with him.

Dr. Tufford was born September 23, 1896, in Aylmer, Ontario, Canada. He volunteered for service and served in the Canadian Army in World War I. He attended Kahki College, Leeds University, England, graduating in 1919. He received his medical degree from the University of Toronto Medical College in 1923. Following his rotating internship at Harper Hospital he trained in the Henry Ford Hospital, division of neuropsychiatry, from 1924 to 1927. He steadily maintained his interest in scientific advancement in his profession. From 1934 to 1937 he secured his professional psychoanalytic training under the auspices of the British Psycho-analytic Society in London. He

began his practice of psychiatry and neurology in Michigan in 1924. He was a residence staff member of the neuropsychiatric division of the Henry Ford Hospital for three years, neurologist of the Children's Free Hospital of Michigan for six years, and associate neurologist and lecturer in clinical neurology at the Detroit Receiving Hospital.

In addition to his participation in the scientific activities of his professional organizations, Dr. Tufford carried forward other intensive interests. A loyal American, one could sense in him many valuable contributions of the English gentleman to our American culture. "Norm" did many things exceptionally well. He was a good sportsman. He loved to follow his games in the correct way. His nice collections of art, books and antiques, attest his good taste. He had a workshop in his home and loved to make things. Perhaps we can best indicate our great sense of loss in his death in observing our having to put aside again and again the wistful feeling that comes to us that he is not gone from us. We extend our deepest sympathies to his family.

JOHN M. DORSEY, M.D.

THE AMERICAN JOURNAL OF PSYCHIATRY

LETTER FROM FRANCE *

MY DEAR COLLEAGUE:

Much time has passed since you have had news of French psychiatry. It is for me a great honor to revive in this JOURNAL an ancient tradition. Like my predecessors I shall try to bring to you as faithfully and simply as possible the spirit of the works that I now report.

During the past six years living conditions for most of us have been such that it might well have been feared that all activity would cease. Numerous members of our profession were deported, two at least did not return: Professors Levy-Valensi, department of psychiatry of the Faculty of Paris, and Dide of Toulouse. Others have lived in hiding and complete isolation. Still others have been casualties of war, for example, Madame Lecomte-Lorsignol, who while carrying her fifth child was killed at Rouen. Many hospitals had to be evacuated and set up again in remote places wherever fortune favored. Everything needful for the care of patients was lacking, at first even food and medicine, especially insulin. Eventually the scarcity of clinical material and of experimental animals forced the laboratories to close. The existence of the line of demarkation between the occupied and unoccupied zones, the necessity of obtaining permits, the paucity and overcrowding of trains, made access to the large centres, including Paris, very difficult for most persons; and in consequence of the black-out, the alerts, the scarcity of public means of transport and the ban on privately owned cars, attendance at meetings of the Medico-Psychological Society was greatly restricted. Despite all this each one in his retirement, even enforced isolation, worked on by himself.

If the results of these labors have seen the light of day, it is primarily due to the efforts of the Editor-in-chief of the *Annales Medico-Psychologiques*. Dr. René Charpentier, whose foresight and planning, including a

change of publisher in order to avoid the restrictions of the northern zone, made it possible to publish the 1940-45 volumes of the *Annales*, with the number of pages reduced hardly one-half, as compared with the preceding five years of peace.¹

In 1943, to celebrate the centenary of the *Annales*, Dr. Charpentier achieved the *tour de force* of publishing a volume of 400 pages devoted entirely to the relations of psychiatry and connected disciplines (neurology, biology, endocrinology, psychology, etc.). The various publishers also succeeded in bringing out several volumes demonstrating flawless bookmaking.² Finally, the Congress of French Alienists and Neurologists was able to hold a meeting at Montpellier in 1942, at which the physicians from the two zones were united for the first time in three years.³

I have reviewed the existing material, but the number and variety of the contributions are such, from pure psychopathology to teratology and anatomo-clinical subjects, not to speak of the clinical curiosities, that it would hardly be possible to report them without expanding my letter into a catalogue. I have preferred to select somewhat arbitrarily certain themes and to dwell a little more fully upon these.

REACTIVE CONDITIONS

(Pathologie de circonstance)

The exodus of 1940 multiplied the emotional psychoses. Caron, Charagnon, Hecaen and Daumezon, notably, reported cases during the following year, some of which were particularly tragic. Another phenomenon also engaged the attention of our colleagues, namely pathological alcoholism. During the "phoney war" of 1939-40 it was a dominant problem in military psychiatry. From 1941

¹ For comparison be it noted that many medical journals ceased publication altogether and that others had to be reduced to one-fifth of their pre-war volume.

² See bibliography terminating this article.

³ See bibliography.

* This review, written early in 1946, does not cover articles appearing after Dec. 31, 1945.

onward, the scarcity of alcoholic beverages and their high prices imposed quite effectively an era of prohibition.⁴

In consequence the number of annual hospital admissions fell to one-half or even one-third of the usual figure (Gouriou). At the same time there was noted an extreme sensitivity to minimal doses of alcohol on the part of the severely undernourished, and particularly among the repatriates (Bachet).

But hospital populations were not reduced alone by fewer admissions; food shortage also played its part. In 1942 Caron, Daunezon and Leculier noted in their hospital, although situated in an agricultural region, a death rate increase of 305 percent above the average figure of recent years. The sensitivity of mental patients to malnutrition has proved to be much greater than that of other categories of the population. A high incidence of pulmonary tuberculosis has been noted (Bourgeois Vié and collaborators; Le-Page, Caron, Daumezon and Leculier). The bone lesions described after World War I by Looser and by Milkman in Austria, have again been reported (Chatagnon and Madon). Especially noteworthy has been a form of cachexia with oedema, becoming generalized, and of such intensity that at Nancy, Hamel, Meignant and Miss Munier observed 166 cases with 145 deaths among 500 internees. Similar cases have been reported by Abely, Adam, Bessiere, Brisson and Talairach, Chatagnon, Dublineau and Bonafé, and by Montassut, Durand and Ripart, Sivadon and Quiron. The most complete study has been made by Baruk and H. Gounelle. In the first stage one finds colitis, with diarrhoea and gastric dilatation; in the aggravated second stage oedema appears, accompanied by intractable diarrhoea and sometimes by signs of pellagra. There follows rapid muscular wasting, with stupor, and death in coma terminates the scene.

After considering the possibility of various vitamin deficiencies, particularly the lack of vitamin PP, and excess of fluid from a predominantly leguminous diet (during 1942 mainly rutabagas and artichokes, hitherto

used as fodder for cattle), most authors have inclined to the opinion of Dublineau and Bonafé, Chatagnon and H. Gounelle that this syndrome results from dietary imbalance due to lack of animal proteins and lipides. The reduction of the blood proteins the therapeutic effect of milk, soya and casein tend to support this opinion.

Psychic Anorexia.—At the Congress of 1942, the psychic anorexias were the subject of a report by Cremieux. Particular importance had been assigned to this topic because too many physicians, following the work of Simmonds on hypophyseal cachexia and that of Bickel, came to regard even the simple forms of psychic anorexia as hypophyseal cachexia. Although the teachings of your compatriot Weir Mitchell and of Déjerine concerning dietary re-education had carried their own evidence, they had lost ground to the uncertainties of endocrine therapy, and success was thereby compromised. The discussion, in which participated Laignel-Lavastine, Porot, Euzière and Bert, Cossa, Noel Peron, Carrier, Donnadiou, Heuyer, Giraud, Riser, Tapie and Giraud, Janbon, Chaptal and Loubatière,⁵ indicated the general acceptance of the conclusions of the report, namely: There are psychic anorexias in the strict sense, mainly of psychogenetic origin, and which are to be distinguished from the psychic anorexias and sitophobias of psychotic patients (secondary to the mental disturbance). There are forms of emaciation and cachexia of endocrine origin.⁶ Finally there are transitional forms. However the true psychic anorexias are vastly more frequent than hypophyseal cachexias. They yield to supervised dietary re-education⁷ (N. Peron); and clinical and biological tests for hypophyseal insufficiency have been negative (preceding menstrual troubles; hypercholesterolemia in spite of jaundice; wide variation between hyperglycemic levels in-

⁵ Who had succeeded in obtaining an extremely active hypophyseal extract, the production of which was rendered impossible by existing conditions.

⁶ Cf. a striking case of Simmonds cachexia reported by Brissot and Froidefond, resulting from lodgement of a projectile in the sella turcica.

⁷ Perhaps less strictly true today. After five years of serious food shortage the psychic anorexias that we now see do not react so well to supervised realimentation.

⁴ Unfortunately, existing legislation, backed by the voting power of the dealers in alcoholic beverages, seems unlikely to guarantee maintenance of this situation.

duced intravenously and orally) Even if psychic anorexia presents a hypophyseal component⁸ it is good practice to proceed as if the syndrome were entirely psychogenetic and to institute the classical Weir Mitchell-Déjerine treatment with the least possible delay.⁹

BIOLOGICAL SHOCK TREATMENTS

In 1940 H. Claude¹⁰ and Rubenovitch made a detailed study of the biological therapies of mental disorders; and in 1945 the subject was dealt with in a book by the present writer. These treatment methods were also under consideration at the Geneva-Lausanne Congress of Alienists and Neurologists in July 1946.

1. *Insulin.* In 1940 a few centres in France were equipped to apply Sakel's method. The subsequent scarcity of insulin curtailed scientific work in this field. In a series of reports on 140 schizophrenics regularly followed up, P. Cossa and H. Bougeant emphasize the thoroughness of treatment necessary—at least 50 shocks with an hour of coma. Of cases so treated they estimate 40 percent of complete remissions. In agreement with other observers they note the greater prospect of recovery in recent cases (duration under six months), with complete remission in 60 percent. In this follow up they found that not more than 10 percent of treated cases whose remissions had lasted six months tended to relapse.

On the experimental side, J. Delay¹¹ with A. Soullairac and Miss Jouannais have noted, in the course of shock, parallel with the hypoglycemia a decrease in the alkali reserve and of blood chlorides, an increase of serum proteins, lipides and potassium without appreciable variation of calcium, also a reduction in the number of leucocytes with shift

of the Arneth index to the left. Cossa and Bougeant, finding in 1939 that insulin shock is accompanied by intracranial hypertension, demonstrated on animals that this phenomenon is due to massive oedema of the cerebrum, cerebellum and brain stem,¹² at first perivascular, then pericellular, finally interstitial. The curative value of insulin coma they attribute to this oedema, a veritable lymphoid bath, which enhances enormously the physiological drainage of metabolic waste products from the nervous tissue. J. Delay and Miss Moreau have since confirmed the independence of the state of consciousness of the blood sugar level, and also the existence of the increased intracranial pressure. They demonstrated a secondary hypotension.

The curious complication—prolonged coma—has received attention, particularly by Abely, P. Cossa, R. Agid and Dalaize published a remarkable case of coma lasting two months and ending in death. During this period the patient presented three successive stages, corresponding to levels of the cerebrospinal axis; quadriplegic flexed contractures, decerebration, decortication.

2. *Cardiazol* has been the subject of very few reports, having rapidly given way to electroshock, a method more readily controlled and less painful for the patient. Bordenat, Porot and Leonardon sought to use the drug as a test of convulsive potential.

3. *Electroshock.* This therapeutic method has enjoyed great popularity because of the ease of its application and its apparent harmlessness.¹³ Cerletti's original contribution dates from the congress at Copenhagen, July 1939. In 1940, despite the war, an article by Plichet made it known in France and Lamarche, DeBeaulieu and Estienne published the first reports of results in our country.

(a) *Apparatus.*—The first work was done

⁸ Such component, hypophyseal or diencephalo-hypophyseal, may be primary (slight constitutional insufficiency, facilitating the anorexic reaction to mental disturbance), or secondary to hypophyseal inanition.

⁹ Cornil, Schachter and Vague have reviewed the clinical and physiopathological problem of the emaciation states (a volume of 232 pp. Masson, publisher).

¹⁰ Professor Henri Claude died in 1945.

¹¹ Recently appointed at the age of 38, professor of clinical neuropsychiatry at Paris.

¹² Pulmonary oedema of similar nature accompanies the cerebral oedema.

¹³ V. studies by Balvet, Chaurard and Tusquelles; Binois; Brousseau, Cazalis and Laubry; Cornil and collaborators; Cossa and Bougeant; Daumezon and Cassas; Delay and collaborators; Delmas-Marsalet and collaborators; Doussinet and Elizabeth Jacob; Forel, Feuillade; Guiraud and collaborators; Heuyer, Bour and Fild; Hyvert; Lamarche, DeBeaulieu and Estienne; Montassut and collaborators; Martimor and Morin; Michaux and Tison; Plichet; Rondepierre and Lapipe; Quercy; Tison.

with a Swiss machine or with whatever equipment could be put together. Soon however, two French machines were available, that of Delmas-Marsalet and Bramerie, using a pulsating current; and one by Rondepierre and Lapipe, using an alternating current. The former had an ingenious device to determine the duration of the current applied (under 200 volts); it also permits the production of non-convulsive shocks (electro-absences). More ambitious, Rondepierre and Lapipe have believed that they could establish a physical law of electroshock.¹⁴ This law can only be regarded as approximate and as lacking the mathematic rigor ascribed to it by the authors. It can be said that with either of these instruments we are able to administer electroshocks under favorable technical conditions and without the risk of overdosage.

(b) *Results*.—There is general agreement as to the remarkable efficacy of electroshock in frank and reactive depressions and the involutional melancholias. Manic attacks react well but relapse easily and may then require insulin. Confusional states respond favorably, provided toxic-infectious factors have been corrected. Non-cyclic states of anxiety and hypochondriac reactions do less well. In the course of schizophrenia (excepting

cyclic and confusional forms) convulsive therapy serves only to supplement insulin therapy.

(c) *Accidents*.—Osteo-articular accidents occur much less frequently than with cardiazol. They are reported less often in France than in the American statistics (perhaps because we avoid mechanically restraining the patients). Doubtless modifications of technique, such as previous curarization, will favor the elimination of such accidents.

Disregarding the rare pulmonary accidents and the reversible psychic complications (the classical amnesia), we turn now to the hotly debated question: does convulsive therapy predispose to epilepsy? The reported clinical observations are inconclusive. However, Delay and collaborators, Cornil and collaborators have shown that patients who have been treated too long by electroshock have electroencephalographic changes (large slow waves) similar to those seen in the subclinical epilepsies. These disturbances probably appear only in predisposed persons, and disappear during the weeks following termination of treatment. They are a warning that treatment should not be extended beyond the twelfth shock without making the electroencephalographic test.

(d) *Biological Study of Electroshock*.—The electrically induced crisis produces a series of neurovegetative, humoral and endocrine changes that have been particularly studied by Delay and his school.

1. Neurovegetative changes: sinus tachycardia, preceded or followed by bradycardia, sometimes associated with changes in the electrocardiogram (Delay and Heim de Balsac); arterial hypertension preceded or followed by hypotension (Delay, Parisot and Luquet); apnea, relieved by inhalation of carbon dioxide; gastric hypersecretion and hyperacidity (Delay and Boitelle); mydriasis followed by myosis (Delay and Dubar). In sum, a short phase of intense excitation predominantly vagal, then a definite phase of sympathetic excitation, finally a phase of slow moderate vagal excitation.

2. Humoral changes. This aspect of electroshock has received long and detailed study

¹⁴ By ingeniously introducing a strong metallic resistance, these authors measure the resistance of the head for a current similar to that used for shock but much weaker. On the basis of 1,000 electroshocks so controlled, they formulated the law as follows: For the same individual and for a given duration of current, the electrical energy required to produce convulsions should be the same whatever the resistance.

It has been objected that the resistance of the skull is not equivalent to Ohm resistance. Rondepierre and Lapipe then registered by the oscillograph the intensity and voltage used. They established, (1) that I and E remain constant; (2) that the angle of incidence is small, with purely Ohm resistance. They therefore concluded that Ohm's law could be applied and that in consequence I and E do not vary, and that R remains practically constant. But Delmas-Marsalet has observed that most of the current furnished by this apparatus is absorbed by the extra-cerebral tissues, the smaller and solely active part traverses the brain and provokes the crisis. We are ignorant of the relationship of these two portions, and this fact makes illusory any absolute determination of the quantity of current required.

by Delay and Soulairac:¹⁵ definite hyperglycemia following a short phase of hypoglycemia and followed by a long phase of hypoglycemia; hyperproteinemia without hyperazotemia; hyperlipidemia without hypercholesterolemia; increased blood sodium with decreased blood potassium; hypercalcemia and hyperphosphoremia, intracellular hyperchloremia without alteration in the plasma chlorides; lowering of the alkaline concentration by about 20 percent.

3. Hematological changes: Hyperleucocytosis with increase of neutrophile polynuclears (contrary to the findings of Felici); shift of Arneth's index at first to the right, later to the left.

Delmas-Marsalet has criticized some of these results and has shown that certain of the observed changes are not due to the effect of the current upon the brain but rather to the great expenditure of muscular energy during convulsions. In fact Delay and Soulairac have shown that in electro-absences without convulsion there is neither hyperproteinemia nor acidosis, but that there is alkalosis, hyperglycemia, arterial hypertension and significant monocytosis.

(e) *Mode of Action*.—Delay has summed up the known data of the manic and depressive processes (experimental and neurosurgical data), of the holothymic and noetic effects of electroshock, its biological reaction, also the fact that the epileptogenic effect of electric stimulation persists in the decorticated animal (Riser). He concludes that the primary effect of shock is probably on the diencephalon,¹⁶ but that the therapeutic effect must be attributed to the combination of coma, convulsion and neurovegetative and humoral shock.

Developing the matter further, Delmas-Marsalet has proposed a psycho-physiological theory of the action of all forms of shock. He has called it the "dissolution—reconstruction hypothesis." According to this thesis the coma represents dissolution of psychic activity, and the waking from coma, re-

construction. Figuratively, one may say that beginning with a given psychic configuration, dissolution reduces it to scattered fragments. Reconstruction must make use of these same fragments but according to a new plan. This reconstructive phase does not simply reproduce in reverse the dissolution phase; the various functions are restored in present spatial and temporal differences.

NEUROSURGICAL TECHNIQUES

The installation of a neurosurgical service (P. Puech) at Sainte Anne's Hospital has made available new therapeutic techniques. Only one report of prefrontal leucotomy (catatonic syndrome) has been published (Ferdier), and opinions have been unanimously reserved. On the other hand there have been many reports of operation for brain tumors presenting only mental symptoms.¹⁷

More recent observations on mental disturbances associated with ventricular hypotension have been very instructive and suggest therapeutic possibilities (Delay and associates; Puech and associates in a case of melancholia); cases with ventricular distention (David, Hecan and Fouquet in a case of dementia); distention of the basal subarachnoid cistern (Delay and associates in a case of acute delirium), or a diffuse cerebral oedema (David and Hecan in a case of catatonia).

Delay has described the encephalographic and ventrilographic pictures of cerebral atrophy in mental defect, Pick's disease, Alzheimer's disease, the degenerative dementias of adults, Huntington's chorea, paresis, toxic dementias and the chronic psychoses.¹⁸ He has indicated the possible therapeutic application in mania and melancholia. He has studied humoral changes following air injection and has pointed out their relationship to the changes induced by electroshock.

¹⁵ V. also studies by Montassut, Delaville and Miss Sauguet, and by Doussinet and Elizabeth Jacob.

¹⁶ The rôle of the diencephalon in psychopathology has been discussed in the Medico-Psychological Society by Delay, Guiraud and Lhermitte.

¹⁷ David and associates; Hecan and Sauguet; Marchand, *solus*; then with Rondepierre, De Ajuraguera and Menanteau; later with Gouriou; also with Courbon; Puech and associates; Riser, Dardenne, Ferdier and Gayral; Tusques, Puech and Miss Leulier.

¹⁸ Delay has made studies of the electroencephalographic changes in the same cases.

OTHER THERAPEUTIC TECHNIQUES

We shall close our discussion of the newer therapies with the mention of the work of Hyvert on the use of gold salts and tuberculin in the convulsive treatment of dementia precox; further, that of Cossa and Bougeant on the tentative treatment of the acute psychoses by insulin; electroshock (Delay) and glucose serum heated to 50° in massive amounts (Hyvert). Penicillin, by the intrathecal and the usual routes, appears to give convincing results in these cases.

PSYCHOPATHOLOGICAL STUDIES

1. *General Psychopathology*.—H. Ey has enunciated, for the somewhat circumscribed group of his followers, a doctrine which carries neojacksonism to its extreme consequences (association of the various mental syndromes with different levels of disintegration). P. Cossa conceives the relations between pathogenic agent and illness in much less rigid fashion, and takes account of the multiplicity of factors involved.

2. *Memory and Amnesia*.—Following his studies on the agnosias, J. Delay has made many contributions to the problem of memory and the amnesias. According to him there are three mutually dependent ranges of memory: sensorimotor (neurological) memory; autistic memory, embracing the whole field of psychic imagery; social and intellectual memory. Focal lesions of central areas involved in sensorimotor memory give rise to *neurological amnesias*, localized amnesias for individual sensory or motor functions. These consist, on the one hand, of sensory amnesias or agnosias (interoceptive, exteroceptive or proprioceptive), and on the other of motor amnesias or apraxias. These localized breaks in memory follow the Jackson laws.

Disturbances of the social memory constitute the *psychiatric amnesias*. These defects of recording and recall may be localized (temporally, lacunar amnesia; topically, thematic amnesia). These conditions also follow the Jackson laws, but are generalized disturbances.¹⁹ In their presence autistic

¹⁹ The aphasias partake of both neurological and psychiatric amnesias.

memory may be stimulated and express itself in memory falsifications, of which *ecmnesia* is an example. This dynamic conception of memory represents a fortunate reaction from the assumptions of the classical atomistic psychology which did not square with the facts. In the specifically organic form of amnesia, that which is forgotten today, may tomorrow, under stress of an emotion, be remembered. The theory of the brain as a storehouse of images cannot account for such facts. They are accounted for however by the conception, inspired by Jackson and Bergson, of a hierarchy of mnemonic functions, normally reciprocally dependent, and which under pathological conditions undergo dissolution from the complex to the simple, from the voluntary to the automatic, and pursue an inverse course in case of restitution.

3. *Psychopathology of Vision*.—J. Lhermitte and J. de Ajuriaguera have studied the physiological effects of lesions affecting the visual function: hemianopsia, cortical blindness, phsyic blindness, verbal blindness, optic alexia and blindness for numbers. Incidentally, a chapter on the psychophysiological theories of psychic blindness illustrates Jackson's aphorism that the location of a lesion must not be confused with the location of a function. Further subjects dealt with by these authors are: spatial agnosia and disorders of orientation; relation of body image to space; constructive apraxia and geometrical apractognosia; and finally amnesia due to occipital lesions. Of particular interest to the psychiatrist is the long chapter on hallucinations both experimental and those due to organic lesions. They consider that pathological hallucinations are the result of a two-fold mechanism of release or excitation of the visual functions, and global psychic deficit. In conclusion, Lhermitte and Ajuriaguera deal with the peduncular hallucinations, studied by them since 1922, and which they attribute to a general disturbance of the regulatory mechanism of sleep, freeing only a part of the sleep function, namely the dream aspect.

4. *Psychiatry and Morals*.—After a long and painful silence H. Baruk has devoted a book to the importance and individuality of the moral sense, its persistence in great men

who have been insane, and the effect of infractions of moral conscience on the development of certain paranoiac psychoses. He carries his thesis over into the sociological field.

5. *Psychoanalysis*.—Finally, while the strictly orthodox psychoanalysts have remained almost inarticulate, one dissident psychoanalyst, Mme. M. Cavé, has had the courage to subject the work of Freud to pitiless criticism. Psychoanalysis has had the paradoxical fate of scoring an immense popular and literary success, while being rejected by the majority of physicians (only the disciples of Freud accept it in its entirety, but with what enthusiasm!) The wholly intuitive quality of the Freudian genius has deprived his work of the criteria of credibility that professional men demand of a scientific publication. It is necessary, as Dalbiez previously indicated, to distinguish in this work that which is *method* from that which is *theory*, and to subject the latter to minute revision.

THE PSYCHIATRIC SERVICES

The law governing the status of the mentally ill in France dates from 1838. It is remarkable that in this field more than a century could pass without the need for modifying the legal controls being recognized. Today, with the therapeutic progress that has been achieved, a revision of the law is imperative. Heuyer and Abely have indicated the changes necessary. Distinction should be made between acute cases favorable for active treatment and the chronic or permanent cases. The former should be admitted to psychiatric hospitals, functioning similarly to general hospitals, or to out-patient clinics. Legal formalities for commitment should be reserved for patients of the latter class. For these should be provided several types of institution: family placement colonies in the country; institutions for workers; custodial hospitals; protective institutions for dangerous patients. Special facilities should be provided for child psychiatry.

I am now at the end of my review. Although quite extended, each subject could only be dealt with very briefly. I have had to omit mention of many purely clinical studies; likewise of the historical works of Quercy on aphasia; the bio-typological investigations of Dublineau and of Delay, and numerous others. I shall be happy if I have conveyed to you the impression that work in France has gone on, to be sure without the material means and equipment that have made possible such splendid results in your country, but at least with ardor and perseverance.

Believe me fraternally and sincerely yours,

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ALUMNI APPRAISAL OF PSYCHIATRIC EDUCATION¹

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Our thesis is that the real yardstick of undergraduate psychiatric training may be expressed as: How does it help the physician in practice? By methods described in detail in our full report, 412 medical officers graduated from 69 of the 78 approved medical schools of North America stated what, in their opinion, was wrong with their undergraduate courses in psychiatry. The vast majority of the respondents were graduated from medical schools since 1940.

More than half the students complained of under emphasis on treatment, and 58% of them that the treatment methods suggested did not seem (to them at least) to be practical. The number one grievance however was that they did not see enough psychoneurotic and "minor" (non-psychotic) cases. As will be indicated below (in the comments) many of the participants complained that nothing that was taught in medical school prepared them for the fact that the general practitioner's daily office case load included many psychiatric problems. More than half the students (59%) registered a grievance about inadequate follow-ups. The instructors mentioned the importance of the "longitudinal sections" but teaching methods were such that they actually saw patients only in "cross section" and had no chance to see what time or treatment did to those patients.

A large number of the officers in addition to checking the questionnaire, made supplementary comments. I will repeat a few of them.

Category 1.—These remarks may tell more about the officer checking the questionnaire than they do about the courses. However, these doctors themselves are products

of our medical education and the remarks thus seem relevant. Samples:

a. "No one was ever kept from graduating in our school because he flunked psychiatry. This weakens respect for the specialty."

b. "Psychiatry is only applied common sense. Why do they teach it in such fancy verbiage?"

c. "There is no way to measure a man's mastery of psychiatry. Examinations don't do it. Whether you pass or flunk does not depend on studying. That makes psychiatry different from any other subject in medical school."

d. "In our school, psychiatry was too easy to pass. It was a cinch course. It was quietly ridiculed by the highly influential professors of surgery and medicine. Suggestible students were thus influenced to adopt the same attitude."

Category 2.—*Laments on the inadequacy of clinical material.* Emphasis here was particularly on the small number of non-psychotic patients made available. Examples:

a. "There was no outpatient department for psychoneurosis in my medical school."

b. "Clinical contacts with patients were far more meager in psychiatry than in any other specialty."

c. "We had no outpatient department; the only clinical specialty without such a department."

d. "Psychiatry cannot be taught from books but only from handling patients. Yet patient-contacts are fewer here than in clinical subjects that you can learn from books."

e. "At ZF there was very little case material in the psychoses."

f. "The course was mostly lectures; it should have been mostly work with patients."

g. "Too much talking by teachers, not enough by the patients."

h. "The lectures were interesting but unsupported by illustrative case material. I

¹ Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

² Respectively: Colonel, Medical Corps, U. S. Army and Major, Medical Corps, A. U. S. School of Military Neuropsychiatry, Mason General Hospital, Brentwood, N. Y.

heard about hysterical convulsions but never saw one. They lectured on phobias but gave us no chance to interview a patient who had one."

i. "The only psychiatric cases we saw were in psychopathic wards or in state hospitals; never in general medical or surgical wards. Yet there's where the real neuropsychiatric material, comparable to office-practice, will be found."

Category 3.—Remarks referable to the personality of instructors. No item covering this appeared in the original questionnaire. Yet a surprising number of comments touched on the personality or skills of the instructors. Samples:

a. "The psychiatric department had the poorest instructors on our faculty. The trustees emphasized certificates, books written, board diplomas held, and society memberships, rather than teaching ability, when it came to selecting instructors."

b. "Professors of psychiatry talk too much, do too little."

c. "So many of our instructors were queer ducks, that we got to think you had to be queer to go into the specialty."

d. "The subject could be presented dynamically. It wasn't."

e. "Psychologists, social workers, and public health people gave us better insight into psychiatry and mental hygiene than our MD instructors did."

f. "Asked for further explanations, one instructor said: 'We teach you enough so that you can tell when your patient needs a psychiatrist. Then you send him to one.'"

g. "At ZG there was a general feeling that psychiatrists were all screwy."

h. "Here's a suggestion: Let psychiatry be taught by normal people."

i. "Queerness of the psychiatrist on our faculty produced an unfavorable student reaction."

j. "At XT our instructor was primarily a neurologist and certainly not a psychiatrist."

k. "At XR the instructors simply didn't have the ability to make you interested enough to listen to their completely foreign subject. Our parasitology instructor, by contrast, made his material interesting. Why can't the psychiatrist do that with his inherently more interesting subject?"

Category 4.—Comments on doctrine:

a. "Our approach was exclusively Freudian."

b. "YQ totally ignored Freud."

c. "We were warned against psychoanalysis at our school."

d. "Psychobiology was taught to the exclusion of all other concepts."

e. "An intense longing for an organic explanation of everything—psychodynamics were ignored."

f. "We had numerous instructors at XM and they used varying terminology and had varying ideas. What was 'tension' to one teacher was 'anxiety' to another. For that matter, what was gospel to one, was anathema to another. I respect academic freedom, but it is all very confusing."

g. "At XG psychiatry was divorced from the basic sciences and from the practice of medicine."

Category 5.—Comments on content:

a. "At ZR students never interviewed or saw therapy."

b. "Emphasis was never on what the general practitioner would see or could do."

c. "Psychiatry was not pictured as intimately tied up with all medicine and indeed, all behavior. Instead it was offered as something foreign, with which we need not have to have any contact."

d. "We needed more emphasis on psychosomatics and on the relations of psychiatry to medicine generally."

e. "At MD psychiatry concerned itself with psychotics, and we never saw neurotics."

f. "We badly needed more emphasis on the social and economic aspects of emotional disorders."

g. "Too much emphasis on incurable cases."

h. "At YQ, time was wasted in the chronic mental wards, emphasis being on 'types' not on clinical psychiatry."

i. "Our preclinical material in psychiatry was devoted to conditioned reflexes, the learning process and the amoeba."

j. "Can't we stress the scientific 'reality' of psychiatric concepts and functional complaints? Most medical students now you know still get the idea that these complaints are unreal. Even though the instructor says

otherwise, he (and most other doctors) *acts* as if the complaints were imaginary."

k. "I had to pick up all my psychiatry in residencies. Our medical school faculty has a state hospital orientation to psychiatry with under-emphasis on minor disorders. When we got through with medical school, none of us had any idea of what in the world to do with a common, garden variety of neurosis."

l. "We should have more stress on psychosomatics."

m. "When the dynamic processes were originally described, we students got to feel that we ourselves must be neurotic. Later we learn that the mechanisms we had were normal."

n. "Only the bizarre, extreme, or humorous manifestations of the psychoses were brought out."

o. "There is scorn for practicable everyday office methods."

p. "Why don't they emphasize preventive psychiatry? I know it would mean working closely with social or governmental agencies, but why not?"

q. "Nothing in our school prepared me for the fact that many psychiatric patients would be treated at home or office, not in an institution."

Category 6.—Comments on the attitude of non-psychiatrists:

a. "Our school teaches enough psychiatry, but when the student tries to apply it in medical or surgical clinics, or as an intern, he is squelched, laughed at, or discouraged by the older 'more practical' doctors."

b. "Psychiatry is important enough to be on the same footing as medicine or surgery. Apparently school officials don't want it that way."

c. "Other departments show hostility to psychiatry."

d. "Other professors make fun of psychiatrists."

e. "Medical-surgical teachers should have told us about personality factors when they talked of peptic ulcer or hypertension. Instead they jeered at any mention of emotional factors."

f. "Psychiatry is so played down in the school schedules that most students feel justified in making a joke of it."

g. "At XT psychiatry was given from 5 to 6 p. m. the worst hour of the day."

h. "The psychiatric lectures at ZF were relegated to the after lunch hour when students were sleepy, and even professors seemed disinterested."

i. "It is taught, scheduled and looked-on, as a trivial course."

j. "The matter may be summed up in a single phrase. Seventy percent of the patients in the practitioner's office present emotional disorders. But only 1% of medical school time is devoted to training the student for this 70% of his work."

k. "Psychiatry . . . was quietly ridiculed by the highly influential professors of surgery and medicine. Suggestible students were thus influenced to adopt the same attitude."

Category 7.—Comments on method:

a. "The psychiatrist should accompany the medical chief on his ward rounds, and thus show us the interplay or emotional and somatic factors."

b. "In my time (1928-1932) at YK the course consisted of a series of lectures haphazardly presented. It left us with the impression that it was a bunk course not related to clinical medicine."

c. "Psychiatry worked this way in our medical school hospital. We excluded organic disease, organ by organ. When the chart was thick with negative reports, the patient was called a neurotic and transferred to a corner bed for phenobarbital. The psychiatric service is then called in. Result: one more sheet on the chart, 3 paragraphs of description and a label."

d. "We had to sit by while the instructor did the interviewing. Practical methods of history-taking, diagnosis, and especially treatment, were not taught at ZT."

e. "What they should do is start working with outpatients, who are mild cases, like what we get in private offices. Instead, they start with crazy people and work backwards."

f. "If they never show us recovered cases, we naturally feel that psychiatry has nothing to offer in way of therapy."

g. "At ZC different instructors would re-

peat the same material. No overall organization in the department."

h. "No effort was made at YZ to 'sell' the students on the importance of psychiatric orientation to daily practice of medicine."

i. "At XE presentations were theatrical rather than clinical."

j. "At ZT students don't get the opportunity to work-up, much less follow-through, on actual patients."

k. "Psychiatry is taught as an isolated specialty, not correlated with other branches of medicine."

l. "Every community has good mental hygiene clinics with lots of non-psychotic cases. Why don't schools use them?"

m. "What was wrong with our course? Organic orientation, poor teachers, poor clinics, no treatment. More time must be devoted to psychiatry; and with students in smaller groups. Interviews should be observed and analyzed, if necessary through a one-way screen or sound records. Why not movies to illustrate interview and therapeutic technics? Always the aim should be—what weapons can the general practitioner use? This should take precedence over nomenclature, fancy dynamic theories and metaphysical treatment ideas."

n. "Follow-up of a psychiatric patient is practically impossible in medical school because students do not remain on a neuro-psychiatric clinical service for more than a few weeks."

o. "In medical school, when a case is discussed, the therapeutic possibilities are dismissed with the single magic word: 'psychotherapy,' with no further elaboration."

p. "In our school, the time allotted to psychiatry was considered an hour of relaxation; or at best a gallery where morbid curiosity could be satisfied."

q. "Psychiatry is a bull course. No books, no roll-calls, no quizzes, no patients assigned."

r. "From the way they teach it, you'd never suspect that minor psychiatric disorders were common in daily practice."

s. "The Army boards are the right idea for teaching. You hear discussion. Couldn't a civilian medical school have a board of instructors to discuss disposition of each case before the class?"

t. "Between the didactic lecture and the actual patient is a gap so prominent that I suspect there is no connection. The patient is real. So I assume the lecture material isn't."

u. "When professors of medicine present cases, psychiatrists should participate."

v. "I suggest that we begin with psychosomatics and use that as a bridge from our organic background to the emotional aspects of disease."

w. "Medical training in psychiatry is given upside down. They start with a theoretical, laboratory, philosophical approach first and this lulls the student, anesthetizes him, almost vaccinates him against subsequent clinical learning. They should start with patients, a clinical psychobiologic, psychosomatic approach so that students would actually see the patients as real human beings not just carriers for complexes and conflicts. Let the theoretical explanations come later."

Category 8.—Comments:

a. "At YC there was inadequate correlation with other medical sciences. There were few opportunities to see cases or talk to patients. At no time were we presented with a practical survey of treatment technics."

b. "There was a clear concept of psychiatry as a whole, but no methods of therapy were suggested at ZG. Clinical facilities were simply not utilized. Pedagogy was deficient because our teachers lacked skill in lecturing."

c. "Psychiatry was considered a 'crap' course at XS; it was understood that it was only a filler. It was not correlated with neurology even. It was taught by a part-time instructor who liked the idea of being a professor."

d. "You lose ground during your internship, because the average civilian hospital has no neuropsychiatric service really, or at best, a belt-line for committing patients rapidly to state hospitals. Nothing comparable to the serious study facilities available in the medical and surgical departments."

e. "Trouble at ZR was: inadequate clinical material; no correlation with general medicine; and neglect of 'lesser' psychiatric syndromes with over-emphasis on the psychoses."

CONCLUSIONS

1. Physicians, on the whole, are not satisfied with their undergraduate courses in psychiatry. This is concluded not only from the number of grievances but also from the comments. Since only adverse criticisms were listed, it might be argued that the mere piling up of more and more hundreds of returns would be meaningless since if the questionnaire had listed only favorable comments for checking, we could have accumulated a long list of desirable characteristics. But in writing the supplementary comments, the participants were free. Here is how these comments shaped up.

Of the 412 officers, 162 or 40% made comments.

Of the 162 comments, 12 were favorable, and 150 (or 93%) were unfavorable.

(More striking, but perhaps less valid is this: Of the 412 officers, only 12 thought that their courses were good enough to warrant defensive comments; that is only 3%. And 97% did not feel that their undergraduate courses justified any favorable comment.)

2. Constructive suggestions for the improvement of undergraduate training in psychiatry may be drawn from two sources: (1) The correction of the indicated grievances, and (2) Affirmative suggestions made by the participants in their comments. Consolidating these two sources, the following constructive suggestions seem justified:

a. With reference to clinical material:

(1) More patients should be presented. (2) A higher proportion of the case-material should be nonpsychotic. (3) Out-patient departments for nonpsychotic patients should be set up and more widely utilized. (4) Lecture material should be correlated with the cases available.

b. With reference to the instructors:

(1) Teaching skill should count more than it apparently has in the selection of faculty members, even if it means selecting teachers with fewer nominal honors; (2) A certain amount of normalness of outlook, apparent common sense, and enthusiasm for psychiatry should be expected of the teachers and should be a significant factor in instruc-

tor selection; (3) Instructors should identify themselves with the other members of the clinical faculty. Thus, selection of doctors from isolated hospitals or sanatoria should be avoided in favor of practitioners identified with the local medical community; (4) Instructors should have rich contact with the peripheral disciplines of psychiatry, such as public health, social work, psychologists and the like; (5) Instructors should be proud and conscious of the fact that they are doctors of medicine so that their identification with medical practice on one hand, and these peripheral disciplines on the other, may make it possible for them to serve as the bridges between the somatic and social aspects of psychiatry.

c. With reference to doctrine:

(1) In the early stages of psychiatric teaching, conflicting doctrinal theories should be avoided, but (2) No doctrine should be dismissed as nonsense (a number of the students complained that the Freudian theories were made to seem repulsive as well as untrue: result was, not avoidance of psychoanalytic doctrine by these students, but apparently a contempt for their instructors).

(3) In later stages of instruction, a certain amount of eclecticism appears to be healthy. (4) Source material of all doctrines and facets of psychiatry should be made available.

d. With reference to content of the teaching program:

(1) More time should be provided for presentation of case material (see *a*, above); (2) More emphasis should be placed on the utilization of the psychiatry in daily practice, even if it means less emphasis on the more esoteric phases of the specialty; (3) The overlap of psychiatry with medicine at one end and psychology and social-science at the other, should be recognized and places found in the curriculum for adequate stress at these margins; (4) Less emphasis should be placed on the psychoses, more on the nonpsychotic syndromes; (5) More, much more, stress should be laid on therapy, with particular emphasis on office procedures; (6) Space and time should be found for preventive psychiatry and mental hygiene.

e. With reference to the medical school as a whole:

(1) Psychiatry should start earlier with attention being directed (a) To simple psychosomatic mechanisms and (b) To variations in normal behavior; (2) A larger share of the medical school program as a whole should be given to psychiatry; (3) Effort should be made to indoctrinate other departments with psychiatric concepts, at least to the point where internists, surgeons and obstetricians do not ignore or jeer at the emotional aspects of disease in their specialties; (4) A competence in psychiatry should be required for graduation to the extent that competence is required in the other departments.

f. With reference to teaching methods:

(1) Methods should be worked out for the follow-up of cases which have been presented for diagnostic demonstration, so that students may learn something of the effects of time and treatment; (2) Better use should be made of mental hygiene clinics in the community; (3) Better liaison should be established with social agencies, psychologists and correctional institutions; (4) Students themselves should be given much more opportunity to interview patients; (5) Methods of therapy should be more often and more widely demonstrated; students should have a chance to hear therapeutic interviews, for instance, even if only on phonograph recordings or through sound films; to see demonstrations of shock therapy, hypnotism,

narcosynthesis, group therapy, etc.; (6) Psychiatrists should participate in medical ward rounds and contribute to discussions in medical clinical conferences; (7) An active openward (nonpsychotic) psychiatric service should be part of every medical school hospital; (8) Better use should be made of out-patient departments in psychiatry; (9) Lecture material should more often be supported by case presentations; (10) The suggestions made under *d* (content of program) should be implemented by suitable teaching methods; (11) Recovered patients should be presented, both to overbalance the general therapeutic pessimism of psychiatry, and to serve in group therapy; (12) Some agreement should be reached among various instructors as to differences in doctrine with a view to avoiding suppression of academic freedom at one extreme and the confusing conflict of theories at the other; (13) Methods utilizing text-books should be prescribed, and their use verified, or factual reference material should be furnished in some other way; (15) Psychiatry should be taken as seriously as any other course in the school with reference to examinations, roll-calls, study assignments, etc., and; (16) Discussion of diagnostic possibilities, treatment technics and mechanisms, by members of the faculty (students participating or at least attending) should be part of case presentations. More than one instructor should participate in each discussion.

PSYCHIATRY IN MEDICAL EDUCATION: THE TEACHER-CHARACTERISTICS AND QUALIFICATIONS¹

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The teaching of psychiatry has been the subject of numerous conferences and discussions in recent months, and one of the inevitable topics therein has been the consideration of who is to do the teaching. I have noted two general avenues of approach to this topic—one starts from a consideration of the size of the teaching problem, which is immense, and the means of multiplying the number of teachers to come somewhere near meeting this need; the other approach starts from a consideration of where we stand at present in regard to teaching personnel and facilities, and the means by which these can be improved and increased.

The latter manner of approaching the problem has seemed to me the more realistic and constructive, and in approaching the problem in this manner attention falls first upon those teachers in medical schools and associated teaching hospitals. How are these teachers chosen? In general, by the same methods used in selecting other teachers in professional schools—by considering those in good repute, who have demonstrated specialistic competence and some qualifications for leadership. It is expected of such a person that he be able to develop in medical students those psychiatric concepts and attitudes which are basic in medical science and practice, that he be able to lead in the scientific advancement in his field through research and the guidance of research, and that he direct the higher graduate training of specialists. The ideal teacher of psychiatry should have a thorough understanding of a very broad range of facts and principles involved in the practice of psychiatry, and he should have a mastery of a number of professional and social skills. This range of knowledge and skill is exceedingly wide. Since it happens to be a fact that psychiatry, in most places, does not now enjoy the prestige which its importance in medicine and in

the social order warrants, it is also hoped and expected that this teacher of psychiatry should be a good propagandist and salesman.

There are no paragons who satisfy all these requirements. Practical compromise is necessary, and a choice has to be made as to which qualifications shall be considered paramount. In a practical world this choice varies with the needs, or the realization of the needs. The decision as to which teaching qualifications are essential depends upon one's conception of the essential nature of the job to be done. Is it possible to make any general statement which is positive and constructive?

I can, at any rate, express my opinion, as a point of departure, or agreement, for further discussion. In my opinion, the paramount general requirement in selecting teachers of psychiatry, at least for the major positions, is the capacity for constructive imagination in the advancement of psychiatric understanding. This is essentially an investigative task of a certain type, and I appreciate that many may have a different opinion as to the present paramount requirement. Some may judge that the present demand for the multiplication of psychiatrists calls for teachers skilled in giving extensive didactic courses, rather than in research. This attitude prevails particularly among those who have found, in one doctrine or another, a personally satisfying orientation to their professional work as psychiatrists and who see the teaching problem as essentially the further dissemination of this body of doctrine.

I would emphasize the fact, however, that psychiatry is at present in a stage of transition. It becomes increasingly a science of psychodynamics, of the understanding of human motivation and the better utilization of human assets and resources, rather than being so exclusively preoccupied as heretofore with psychopathological phenomena. I express this thought not merely as an enthusiastic hope, but as a statement of actual

¹ Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

progress. As I conceive it, therefore, the most significant part of teaching psychiatry today is to engage the oncoming generation in this forward endeavor, with whatever insight and understanding is at present available, rather than merely to train in current techniques, classifications and practices.

A thoughtful consideration of the foregoing statements will reveal an attitude on my part, prompting these statements, which may not be very popular in this particular meeting. What I have said implies a somewhat disparaging attitude toward the present state of psychiatric science, because I stress the paramount need of developing something better to teach as psychiatry. There is risk of being misunderstood and misquoted in my expression of this attitude, for many persons are ready and eager to seize upon any pretext to berate psychiatry; nevertheless, I do wish to express as emphatically as I can the conviction that, at the present state of affairs, teachers of psychiatry should be chosen primarily for their capacity to lead in the development of a psychiatric science basic in medicine, rather than as mere instructors of current formulations.

Out of the experiences and great sacrifices of the war, and the tensions of present uncertainties, there has come to many doctors an appreciation of the rôle of emotional factors in illness, and with this appreciation a strong desire for further understanding and skill in dealing psychodynamically with such problems, and a considerable impatience with the static conceptions which many remember vaguely with distaste as the substance of so much pre-war psychiatric teaching. Emotional malfunctioning is widely recognized now as one of the major aspects of medicine, and it is my feeling that the teaching of psychiatry demands now, more than at any other time, perhaps, that the teachers be prepared and qualified to guide this surge of interest in an investigative spirit. That is the fundamental reason why, at the present time, I put such a premium upon the capacity for constructive imagination as a qualification for teachers of psychiatry.

By what signs and symptoms is this special qualification to be discerned in the potential teacher? It is the common practice to

evaluate these creative capacities by compiling a bibliography of one's publications and evaluating this quality in the author. This implies that one has published some investigative work. This is one of the reasons why in every training program one should invite and encourage investigative work. Much may be inconsequential, but talent will be brought to expression and to growth.

The teaching of psychiatry is a team-work proposition, because the variety of knowledge and skills which must be presented and exemplified to the trainee exceeds that likely to be possessed by one person; hence the teaching department must include those having supplementary talents. Just as the team has become the practical means of psychiatric service, so the teaching team is the means of gaining the required combination of qualifications. The aim is not to catch a young and impressionable trainee and teach him all those skills and bodies of knowledge, which as I have said no single teacher can be found to possess. The aim in building the teaching team should be to provide a fair range of stimulation and guidance from which all will gain a broad view and each gain further profit according to his talents and interests.

In a period of rapid expansion, such as the present, there is an inevitable tendency to standardize subject-matter and methods for the mass production of psychiatrists. This problem sets the stage, actually, for the present emergency in psychiatric training, and my preceding remarks may have seemed to some to be beside the point because not directly concerned with this mass-production program. For that purpose, the primary considerations are not maximal effectiveness but minimal tolerances. The Veterans Administration, in particular, seeing a large and expanding psychiatric service problem, have been trying to shape up educational programs which would train considerable numbers, and at the same time attract the desirable men. Since desirable men are likely to be those attracted by a good educational program, the policy enunciated by General Hawley, to develop teaching hospitals in the service for veterans, and to link these closely with medical schools, seems eminently sound and logical. One of the major difficulties is personnel, for it is just in those university

teaching hospitals called upon for this service that a heavy expansion of training program has already recently occurred to satisfy so far as possible the obligations to physicians returning from military duty. I venture to say that every university hospital training center in psychiatry is already bursting at the seams with young doctors back from military service, using the available clinical material to the utmost and requiring the time and effort of the available teaching team. New teaching personnel is urgently needed to implement any further expansion in training.

Since the specialty Boards have been established, and the certificate of the American Board of Psychiatry and Neurology has come to be one of the goals of the young psychiatrist's training, it has been natural to assume that such a certificate is an appropriate prerequisite for a teacher, particularly in a large scale organization such as the Veterans Administration and in the large state hospital systems, where a rather formal statement of qualifications is wanted. The meaning and value of this particular qualification—the certificate of the Board—rests in the ultimate analysis upon the policies and practices of the American Board. It seems appropriate, in order to avoid some misunderstanding and disappointment, to call attention to the fact that the Board certification has never been intended directly to certify to teaching qualifications, but only to indicate a safe level of specialistic competence. Here again the Veterans Administration has made a shrewd move in establishing Dean's Committees and asking them to make selections of attending and consulting specialists, thereby gaining the guidance of a group of persons accustomed to selecting teachers.

One of the most interesting current experiments in the teaching of psychiatry at the graduate level is at Topeka, and one of the most interesting features of that experiment in dealing with large numbers of trainees lies in the intensive testing and instruction at the beginning of training. The central core of graduate psychiatric training has consisted, I think, in the supervision and guidance of clinical work, which proceeds usually at a slow pace which permits growth in professional competence to proceed in indi-

vidually varying patterns, with much modifiability in the individual's reading program and grasp of theory. In this pattern the teacher qualifications are insight, sympathy and versatility to adapt to the individual trainee's needs. It seems possible, however, that a larger amount of intensive didactic instruction may be integrated into the training program quite early. By a combination of these methods, a well integrated teaching team may be capable of more effective mass-production than we have usually assumed to be the case, thus magnifying the importance, so to speak, of black-board talents for teaching, whereas we have tended in the past to depend most upon bed-side teaching qualifications. The Topeka experiment will be watched with great interest to gauge the effectiveness of such intensive instruction.

The principal training ground in the past for young psychiatrists has been the state hospital. As Dr. Forrest Harrison has indicated elsewhere, the present aspirants for psychiatric training have shown little desire for state hospital training—a situation which may perhaps increase the pressure to improve such training. There is little doubt that one of the weakest points in the state hospital training lies in the enforced preoccupation with the psychoses and the comparative neglect of the neuroses, and that another weak point lies in the failure to make actual provision for adequate supervision of training. Just doing the routine clinical work is not enough, nor is this adequately supplemented simply by arranging administrative and diagnostic case conferences. The clinical directors in state hospitals are in the logical position to direct the training program there. Aside from the heavy load they carry, they are also sometimes handicapped because their own training has been one sided. For the sake of their teaching effectiveness, especially in the field of psychodynamics, which is destined to be a cornerstone of social psychiatry and practical mental hygiene, these teachers should have out-patient services in which to teach. Here again proximity to medical centers, and close association therewith, would increase the teaching effectiveness, not only through the contacts thereby made possible, but also because clinical di-

rectors better qualified as teachers would there be available, and would probably work at that teaching task more happily and effectively than in rural isolation.

In bringing this brief discussion to a close, rather than to a conclusion, I presume you share somewhat in my own feeling of frustration at the lack of a specific and practical formula for the selection and multiplication of teachers of psychiatry, according to a spe-

cific pattern of characteristics and qualifications. I wish to reiterate, in closing, what seems to me the most significant point in the qualifications for teaching psychiatry at the present time—namely, that the teacher possess, in addition to good repute and professional competence, the capacity for leadership in the progressive and constructive use of scientific imagination in building a more adequate science of psychiatry.

WHAT SHOULD BE TAUGHT

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Outstanding among the questions that come to mind concerning psychiatric education are, first, what are the defects and difficulties interfering with the teaching of this subject in the medical schools? Second, what reforms are necessary to overcome these obstacles? And, third, what methods should be adopted to establish the ends desired?

Foremost among the difficulties interfering with teaching as expressed by those psychiatrists connected with the majority of medical schools are lack of or seriously limited funds, too little time in the curriculum, and limited personnel. These hazards cover a lot of ground to say the least and have so far proved to be most difficult to resolve, but it is possible, if not probable, that we can do a better job than we are now doing with what little we have. Although psychiatric teaching is improving and is efficient in several centers, it is not so in the majority, and I feel certain that one can say without fear of contradiction that general physicians are not well informed in psychiatric principles, in fact, far less informed than in any other branch of medicine. Moreover, the failure of general hospitals to deal with the simple or mild mental problem or complication, often needing little more than some applied common sense, is conspicuous and often pitiful.

Even in the best psychiatric teaching centers the medical students' reaction to psychiatry may and often does constitute an obstacle. Among the various types of attitude one can detect in the student body are the following:

1. The student who is really interested in the subject, goes in for it, and learns what is taught and even something in addition.

2. The student who is interested and desirous of information but who is puzzled by what seems to be the complexity of the subject, feels that he is missing something, and finally fails to get hold of the basic principles.

3. The student who does not take the course seriously, who is even amused by it, but feels that he should or has to learn enough to "get by" with the examinations.

4. The antagonistic student who cuts class periods, who criticizes everything that is done, and often flunks the course, particularly in those schools where psychiatry is still a subordinate branch and where one can still graduate without a passing mark in this subject.

5. The student who purposely or consciously neglects the subject because he has decided to become a surgeon or an internist, and thus "will have little or no use for it anyway."

Therefore the real significance and real meat of the subject will not reach many of them unless such obstacles are constantly in the minds of the instructors and definite plans made to deal with them. To many students the subject does not seem practical because in their minds no correlation is evident between the course in psychiatry and the other courses. There is no common ground. This separation of the subjects may not be intended at all by the instructors but the students seem to have the tendency to an automatic development of two compartments of thinking, nevertheless, and thus the psychiatrist becomes segregated and is looked upon as the one who takes over after no one else is able to discover anything wrong with the patient.

Although as instructors we are pretty well aware of the situation we do not do enough preparatory work aimed at the elimination of the student's layman concepts which block his progress; the student when he comes to us is usually handicapped by the concept of "insanity" that he acquired from infancy on, before he entered medical school. The layman ignorantly assumes that his own ideas on mental disorder are on much safer ground than his knowledge of physical disease, and even now ignorant jurymen pass glibly on "sanity" and "insanity." The average student is loaded also with other related misconceptions such as that all people are either sane or insane; that all psychiatric patients are either "crazy," noisy, destructive or

dangerous, or at least may become so at any time; that they differ from each other only in degree; that mental disorder is due either to heredity or personal misbehavior and is therefore a family as well as a personal disgrace; that all mental disorder is incurable; and that a "nervous breakdown" is not mental but is a disorder of the nerves or nervous system.

These attitudes and concepts are widespread and no great dent has been made in their ranks despite the attempts we have made to disseminate knowledge to the contrary to correct them. We must work more intensely and directly on our students with plain words and not merely incidentally nor by implications dropped unsystematically.

Procedures cannot be standardized very well as every teacher will have his own individual way of doing the job. There will always be those who can teach inspiring, systematically and efficiently, and also those who cannot, regardless of strong efforts and the desire to do so.

With many of the limitations and the many aspects of the subject, some of which are controversial, in mind, I should like to comment more specifically on some objectives and principles of psychiatric teaching and on what should be offered to the student.

Psychiatry is a major branch of clinical medicine with its fundamental principles, now known as "psychodynamics" functioning as a basic science contributing to all other divisions of human medicine, in the same sense that biochemistry, pathology, anatomy and physiology serve as foundations contributing to all branches of clinical medicine. Psychiatry can no longer function properly as a minor specialty in the medical curriculum.

Whatever is taught should be presented in a clear concise way, well organized, and not in a technical involved terminology. Students prefer to be presented with classified knowledge with emphasis on diagnosis, dynamics, causes, and particularly on treatment. Too many instructors emphasize the rare and what is particularly interesting to them at the time and drift over the more common things with brief remarks. And may I add that psychiatric teachers are not the only

sinner here. It is a too common characteristic of medical teachers. Other instructors do splendidly with their own subspecialty but teach the rest of the topics poorly. Therefore the heads of departments should devote more attention to the correction of this fault, by arranging a program which will not depend entirely upon the individual interests of his assistants but will take them into consideration and utilize them properly.

To preface the scheme of training the medical student in psychiatry I should like to start with:

I. *Premedical Preparation.*—This has some direct bearing on psychiatry. There is at present an inadequate training in the biological sciences in most colleges, particularly in those parts that have to do with human biology and human nature. Those students poorly trained in biology misunderstand many things and are not equipped to do scientific work in general, much less in psychiatry or sociology. Scientific thinking is not easy for those not initiated to it. It does not come naturally like emotional or wishful thinking. Those who do scientific thinking have to go through a severe grind to achieve the technique.

In addition to thorough courses in biology the student should have premedical courses in psychology from some dynamic viewpoint to replace the old psychology of the "mental faculties." A vitalization of the whole field of college psychology is sorely needed.

An understanding of some of the common principles that run like a thread through the web of life should be had before the student ever reaches the medical school. Over 25 years ago my teacher in biology, Professor H. S. Jennings, then of Johns Hopkins University, used to emphasize that something more was required in the study of living beings than a knowledge of the environment, of the chemical constitution and of the physical states of the various substances that go into the composition of the organism. This something else is what is often vaguely designated as organization or integration. The real problem is not to be satisfied with discovering how many structures and functions exist, but to learn as much about the common principles that exist

in them all in preparation for the courses to be presented in the medical school.

II. *Preclinical—First Year Courses—Introduction to Psychiatry—Introduction to Human Behavior.*—In the medical school it is a desirable plan to have a part of the first year course given in cooperation with the department of physiology, with particular attention to the functions of the nervous system in terms of sensory, motor, reflex, secretory and tropic phenomena. Some of the valuable fundamental points for instruction are:

1. The character of transmission: How the nervous system adjusts man and other animals to the environment and how this in turn has fostered the development of the nervous system. Material should be given to point out the special abilities of the organism to respond to kinds and gradations of environmental change, and how man does so with rapid, variable, integrated and especially adaptive behavior patterns.

2. A special introduction to the functions of the autonomic nervous system and how it is dedicated to self-preservation; un verbalized affect or "feeling," emotions and their physiological components, and physiologic and psychologic homeostasis deserve a major focus of attention.

3. The highly specialized functions of the brain as expressed in awareness, attention, perception, memory and particularly the manner in which these participate in the master function of language with its various regulations in personality structure.

4. Integration patterns of reaction with emphasis placed on the mechanism of adaptation as it applies in human affairs and interpersonal relationships.

5. The various elements that seem to be dynamic in the integration of the personality.

III. *Second Year Course: The Study of the Personality.*—During the second year among other things emphasis may be placed on the more specific aspects of the constitution. The constitutional trend in psychiatry usually includes teaching and research based on biology, serology, bacteriology, biochemistry and hereditary transmission. My

own concept of presenting the formative elements of "total constitution" includes a review of heredity, malformations, the diseases of early life, disorders of nutrition, parent-child relationships, family tradition, contact persons and cultural background.

Although the second year student has had little or no experience in clinical medicine he is in the midst of his heavy year in pathology. Therefore it is well to introduce him to some clinical psychiatric material having demonstrable pathological lesions. This, if done properly, constitutes the real closure of the gap (that exists in the student's mind) between somatic and psychologic diseases. Definite organic changes in the central nervous system such as nutritional disturbances, endocrine deficiencies, polyneuritis, other inflammations, degenerations, senile and arteriosclerotic reactions, neoplasms, and the various types of neurosyphilis when they are accompanied by psychoses or have precipitated mental changes constitute valuable teaching material since the instructor can demonstrate the pathology of the lesions and of the personality types in the same individual and setting. Organic speech disorders and those of locomotion accompanied by psychological distortions are also excellent for introductory clinical courses. Special laboratory and clinical procedures such as the study of eye grounds, spinal fluid and encephalography help to fix certain disorders in mind. Also, as an aid in developing a desirable attitude some of the classical toxic states may be introduced in the second year, *e.g.*, the alcoholic reactions and those of toxæmia of pregnancy. Deliria with fear, clouding of consciousness, hallucinations and delusions, along with the physical and laboratory evidence of disease or chemical components are valuable introductory clinical material with few or no gaps showing between them and the problems of general medicine of which they constitute a part.

Some time should be devoted in the second year to teaching the development of the personality relative to mental mechanisms. When this is well done and kept at the practical level it is excellent preparation for the heavy clinical year to follow. It should include the role of the constitutional and

emotional equipment, the development of the libido, the life periods of special importance, the ego construction, object attachment, conscious and unconscious drives, the pathological effects of emotional conflict and capacities for adaptation and adjustment.

In lectures to beginners in psychiatry we as specialists are liable to assume that the student knows more than he does. We must guard against this tendency religiously, or we find ourselves slinging in terms and concepts that are as yet meaningless to the class, particularly when the students have had little if any general clinical experience of any kind. Often when we are a little off guard we slip in terms that have not been defined for the class, and even those that are not too clearly understood by ourselves.

IV. *Third Year: Clinical Psychiatry.*—In the heavy clinical years the student should be taught how to evaluate personalities, the phenomenology of the various mental disorder syndromes, and the basic psychodynamics in force in order to afford him as much understanding as possible of the factors contributing to mental illness.

In teaching the subject to medical students, most of whom will not become specialists in the subject, the orientation should be pointed into the general practice of medicine rather than into the practice of psychiatry as a specialty.

The study of the concept of the "total individual" seems to be a didactic attitude to many students and physicians instead of something for practice in the clinic. The average doctor does not even know that when a patient comes to his office accompanied by a companion, unless that patient is a child, an aged feeble person, or one acutely ill requiring physical support, that nine times in ten the mental situation is foremost in the problem regardless of the nature of the etiological factors.

In general medicine as well as in the specialties a very high percentage (50-70) of all patients treated have "functional" disorders while practically all "organic" reactions or illnesses from lesions express mental symptoms ranging from mild anxiety and fear of pain to confusion and active delirium.

The student should understand from the

beginning that the old concept of mind and body is now considered unsound and that the patient with his skin, bones, bodily organs, brain, emotions and life experiences constitutes an entity to be studied as such in action. He should be taught that certain primitive biological needs are characteristic of all individuals and that there is an intimate relationship or correlations between psychological factors and bodily functions that renders collaboration between psychiatrists, physiologists and internists essential.

The study of psychiatry brings the student closer to the things amongst which he lives, widens his horizon and intensifies his hold on life. Therefore, any scheme for clinical teaching should begin with familiar events and phenomena, should be related to daily life and should not be taught with a view to making specialists, as this objective should be retained for those who develop a flair for special knowledge. Minute and detailed studies in psychiatry should be made only as a specialization after the student has had experience and when his judgment and sense of relationships have been trained in this field.

It is important to instruct the young clinician in all aspects of the patient-physician relationship. A thorough training in the technique of interviewing cannot be over-emphasized. The psychiatric interview well conducted by an expert will reveal more about a patient mentally and/or physically than any other single procedure or type of examination. This is a bold statement, but one that can be defended and demonstrated by any experienced psychiatrist, who is also well grounded in pathology and internal medicine. Moreover, the student should know that every interview has either a favorable therapeutic or an untoward effect on the patient.

Clinical observation remains the foundation of psychiatric medicine and it becomes an essential discipline if progress is to be made. Students and others in training must be taught to make thorough clinical examinations at the bedside of the patient, in keeping with similar methods used in general medicine.

During the third year lectures and demonstration courses covering the principal re-

action types of psychoses, psychoneuroses and the special problems of children become essential, as well as do conferences in two and clinical clerkships in three hour periods with their opportunities for informal discussions with the instructors who have assigned them suitable cases.

The teaching conference should rarely be less than two hours long. Here there should be allowed, a free expression of opinions to give the student experience in thinking and discussing. In most teaching clinics and conferences they are not given a sufficient opportunity to participate. I find that students in these situations are capable of asking some very challenging questions concerning the behavior of the patient, the meaning of the content of his speech, the differential diagnosis, and the therapeutic approaches.

Among the topics and types of cases utilized in the psychiatric hospital, in outpatient departments and on the medical and surgical wards one would include as many as possible of the "organ neuroses" and other psychosomatic problems, and stress the application of supportive psychotherapy in general practice. The technique of interviewing and the critical analysis of information gained from patients by the student should be constantly in the foreground for possible improvements and for advice from the instructor. In these clinical clerkship hours the student should become familiar with and have experience in the thorough working up of case histories from the psychiatric viewpoint.

Whatever procedure is followed and taught in history taking technique it should go without emphasis that it should be well organized, systematic, as accurate as possible, orderly chronologically and include those psychobiographical events that have a bearing on the lifeline, growth, development and adaptation of the patient concerned. These topics need not be enumerated here.

When once the history taking technique is learned through application to cases, perhaps not too much is gained by prolonging it. Some of the hours available might be devoted to reading selected references rather than to prolonged history writing "into eternity." Much of the psychiatric history as taken in some places may be highly impor-

tant in research or to the thoroughgoing specialist but it seems to the student to be a waste of time and makes a heavy drain on his interests.

The phenomenology or the descriptive features and the differential diagnosis should be clearly presented. The diagnosis of mental disorder or "psychoneurosis" by the exclusion of somatic diseases is rarely justified. Diagnosis is possible on the basis of positive evidence in the great majority of cases, and the student should learn to do it on positive findings. This statement is not intended to discourage any necessary or desirable studies to test the assumptions and conclusions.

Owing to the trend of interests and the recent tendency of instructors to bore into the dynamics and pathoplastic environmental and social features to the neglect of good clear descriptions of the disorders, many medical graduates speak glibly of "complexes" and "inferiorities" but lack skill in differential diagnosis such as students have always wanted and will rightly continue to demand.

Both phenomenology and "depth" psychology should be taught. If the unconscious factors are omitted or slighted the students will be poorly trained and experience has shown that such are no match in a clinical situation for those well oriented and properly acquainted with the functions of the unconscious.

There should be a systematic presentation of the history, fundamental concepts and principles of psychoanalytic thinking and practice, and of its evolution and place in modern psychiatry and sociology with emphasis on the theory of instincts and of ego psychology. Because of its unique value for the understanding of human behavior it belongs in any basic training program.

V. Fourth Year Training—Additional Clinical Experience: Practical Applications.—By means of lectures and clinics the fourth year student should be informed on the practical management of all usual types of cases and about places where patients may be treated; namely the approach, study and treatment of the patient when visited in the home, when seen in the physician's office, and when seen in the clinic, and also,

of course, the different types of hospitalization facilities. There should be an evaluation of the different therapeutic procedures and methods, with particular attention to the emergency problems which he will have to meet when he is out in the community in practice.

During the fourth year the student should be made acquainted with certain practical aspects of the mental hygiene laws, including the various ways of admitting a patient to a hospital for mental disorders, the legal and property rights of patients, the medical and legal concepts regarding the so-called "criminal insane," and particularly the medico-legal practices regarding accident and compensation neuroses with their attendant court work features.

In times of war there are certain special military psychiatric problems that have to be brought in for consideration. Here traumatic neuroses and psychoses from head and other injuries, post-traumatic constitutional reactions, conversion states, acute flurries and malingering are among the disorders, the wartime study of which has contributed to our understanding and treatment of similar, but sometimes not exactly similar states found in civilian practice.

All the problems in the foregoing paragraphs should be illustrated by clinical material whenever it is available.

Throughout the year additional work can be done on the psychiatric syndromes, in clinical clerkships, on the wards and in the outpatient department.

As a major function of the medical school the hospital outpatient department is to instruct medical students and interns. It affords during the third and fourth years, an opportunity to observe those cases which are not admitted to the hospital but will be seen in general practice.

Should there be extra hours available elective work may be undertaken. The special focus for elective study can be worked out on the basis of the time, the particular interest of the student, the material and the opportunity for such work in the department.

Before closing, a few additional general teaching suggestions for improvement that apply here and there through all of the medical school years might be offered:

1. More time should be spent in teaching how to examine a patient psychiatrically.

2. More subclinical cases and problems should be demonstrated.

3. A better orientation should be afforded in the pertinent literature—books and references to read during the courses. In many centers this is sadly neglected.

4. More emphasis on the sociological aspects of the subject and on the principles of mental hygiene.

5. A more extensive use of charts, outline schemes, pictures, lantern slides, moving pictures, pathological specimens, and patients for demonstration.

I believe I have indicated the territory to be covered and what should be taught, but I have refrained purposely from stating any definite number of hours, either minimum or maximum, desirable to accomplish the purpose. Naturally the time allotted to psychiatry in the medical schools depends on a number of matters which are the concern of those involved in any particular organization and curriculum plan. We usually need more time than is available in a crowded medical schedule, and therefore we have to plan carefully to expose the student to as much useful information as possible.

CONCLUDING COMMENTS

Any "science of life" must deal with life and its aspects as it finds them regardless of the type of manifestations or whether they will submit to a laboratory experiment. Therefore, instruction should be focused largely on clinical entities, giving only sufficient theoretical background to orient the student in the problems. Good teaching results in a quickened perception rather than in absorption of facts. A medical education for the average student is not completed at the medical school. It is only started there, but the student can develop habits of accurate observation, and the all important "attitude" that is necessary to understand even the elemental problems of psychiatry.

As objectives, students in medicine should be taught two fundamental principles:

1. The concept of man as a reacting entity, as a living being in action, and that therefore mental disorders have a "natural history."

2. That psychiatry is a part of medicine in general, and that psychosomatic problems will confront the physician regardless of his type of practice or special interests.

After four years in the medical school the student should be sufficiently informed in psychiatry to:

1. Recognize the usual manifestations of mental disorders and the common emotional components of physically ill patients.

2. Undertake the practical handling of

such situations, and decide what patients may be treated by the non-specialist, what patients indicate a sharing of responsibility with a consultant in psychiatry, and what patients require immediate and full psychiatric study and control by a specialist.

3. Be alert to their special obligations to do what is necessary to protect the patient, the patient's family, and the interests of society. The rest of it may be undertaken as a specialty in post-graduate work.

THE GENETICS OF EPILEPSY¹

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A genetic influence in epilepsy is not in question, but only the degree of that influence. The remark made by Galen early in the Christian era still holds good, "Always this is to be remembered that no cause can be efficient without an aptitude of the body." How great is this aptitude in epilepsy and how is it to be detected?

Geneticists have been, and are, much more interested in plants and lower animals than in man. Animals have epilepsy and the fact that convulsions, spontaneous or induced, are more common in some animals than in others is a demonstration of constitutional differences. For example, the hair trigger rabbit reacts more readily with a convulsion than the more phlegmatic cat. Also, a difference in "threshold" or susceptibility exists between strains of the same species. For example, audiogenic seizures can be induced more readily in gray Norway than in Wistar Albino rats(1), and in domesticated than in wild rats(2). However, attempts to demonstrate transmission of this trait in the offspring(3) or to determine a Mendelian pattern(4) have not been conclusive. Doubtless, examination of the incidence of convulsions and of threshold to convulsive agents in animals with respect to species and to the structure and organization of the central nervous system, together with attempts to develop epileptic strains, would be rewarding. Little or no study has been made of the occurrence of spontaneous cerebral dysrhythmias in animals of different species and whether such dysrhythmias, if they occur, are transmitted.

Without this help from our animal allies, we must perforce depend on evidence drawn from a study of human material. This means a study of family trees, either individually or as a forest. Every family tree, if examined

twig by twig, would be an epileptic tree, for something like one person in 200 has epilepsy, and a family tree has innumerable twigs. However, twigs carry little weight and most reliance must be placed on examination of the visible lower branches. In other words, how many of the members of the immediate family of the epileptic are similarly affected and how does this number compare with the immediate family of non-epileptics?

From Hippocrates onward, physicians have speculated about the place of heredity in the etiology of epilepsy. In the scores of generations which have succeeded Hippocrates, doctors have continued to speculate—but not to tabulate. Admittedly inherent difficulties of tabulation are substantial. Two of these are: the inexact delimitation of epilepsy (the differentiation from syncope or hysteria, from convulsions of childhood, from a "cured" epilepsy); and the difficulty of gathering truthful information about symptoms which must be kept secret. Any dependable structure of knowledge must be built on the following data:

1. The incidence of epilepsy in various age groups of the general population.
2. The incidence of seizures among the blood relatives of epileptics with attention to possible genetic and acquired factors.
3. The incidence of seizures in those relatives in which the hereditary factor is known, *i. e.*, in monozygotic twins.
4. The incidence of asymptomatic cerebral dysrhythmia in the general population, in epileptics and in the co-twins or other relatives of epileptics.

We shall outline the progress which has been made in these various categories. Stein (5) has reviewed the older literature, most of which is not significant because of the small number dealt with, the lack of control data, or the introduction of clinical entities, like alcoholism, hypertension and insanity, which have no demonstrated "blood relationship" to seizures.

¹ Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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I. EPILEPSY IN THE POPULATION

The incidence of epilepsy in the population—a fundamental point of reference—is unknown. Among the near relatives of 1115 personnel of state hospitals 0.66 percent had experienced one or more seizures(5). Figures from the military draft have the virtue of large numbers but the defect of a selected age group and, what is more important, virtual dependence on the draftee's statement for the diagnosis. For want of better data, most writers accept the incidence reported in the United States draft figures for World War I, namely, 0.5 percent(6). The screening out of epileptics who were in institutions, the absence of the child population with its high seizure rate, and the failure of many men to know about or to report their seizures are factors which, if corrected for, would tend to increase the reported incidence. Therefore 0.5 percent is probably a conservative estimate of the proportion of the population subject to recurring seizures.

2. INCIDENCE AMONG RELATIVES

There would seem to be no excuse for inadequate information concerning the number of epileptics among the blood relatives of epileptics. The family histories of hundreds of thousands of patients are in the records of institutions, of clinics and of private physicians. Tabulations of small groups have been published, but results cannot be combined to form a worthwhile total because of the diversity of methods used in collecting and in treating the data. Most authors ascertain the percentage of patients who have a "positive" family history, but the extent of the relationship included is variable. The method takes no account of heavily or lightly laden family trees, and "control" information (the percentage of affected families in the general population) is lacking.

For the reasons just stated, we elected to deal with the morbidity not of families but of individuals, the method used in all vital statistics. Sixteen years ago, Stanley Cobb and I distributed 6,000 blanks among neurologists throughout the country and asked them to record on these blanks certain information about clinic and private patients

seen during the following 12 months. The observations which follow deal with the data contained in more than 2,000 blanks. Most of the clinical tabulations await publication. We deal with the members of the immediate family only, the parents, siblings and children of the patient. We determined their number and the incidence of epilepsy in the total and in subgroups.

The 2,130 patients have a total of 12,119 near relatives, whose history is stated. Of these 2.7 percent have a history of recurrent seizures. This means that any given child of the "average" epileptic has about 39 chances out of 40 of being "normal." The incidence of 2.7 percent is approximately 5 times the incidence of epilepsy among draftees in the first World War. Therefore, as stated in the beginning, heredity is undoubtedly a factor in the etiology of epilepsy.

Comparison With Other Diseases.—For maintenance of perspective we should compare this five to one ratio with ratios similarly determined for other non-infectious diseases. Unfortunately, this seems a neglected field of interest, and we can note only that on the basis of the proportion of persons with a positive family history, the influence of heredity is about the same in diabetes and in epilepsy, 2 times greater in obesity, and 8 times greater in migraine than in epilepsy (7).

Genetic Versus Acquired.—Among the 2,130 patients of this series only 17 percent knew of any blood relative who was similarly affected. Therefore, heredity cannot be the whole cause of seizures. In one patient it might be 10 percent responsible, and in another 90 percent. Study of the histories of epileptics quickly dispels the "either-or" conception of etiology. Too many patients have both a family history of epilepsy or migraine and evidence of acquired brain pathology. Heredity is not a fixed all or none ingredient. Acquired morbid conditions bear a reciprocating relationship to transmitted predispositions, as illustrated by the accompanying diagram (Fig. 1). The smaller the genetic influence, the greater the influence of those conditions which are acquired. Of possible acquired states, those resulting in pathology of the brain, either an-

atomical or physiological, are of most consequence. However, severe damage to the brain may not in itself result in convulsions either in animals or in persons. Professor Lashley, who has mutilated the brains of numberless rats in his maze learning experiments, never observed one with convulsions (8). Kopeloff *et al* (9) found that only certain substances introduced into the brain proved epileptogenic. In patients both the location and the extent of brain injury are

SUGGESTED RELATIVE INFLUENCE OF GENETIC AND ACQUIRED FACTORS
IN HYPOTHETICAL CASES OF EPILEPSY

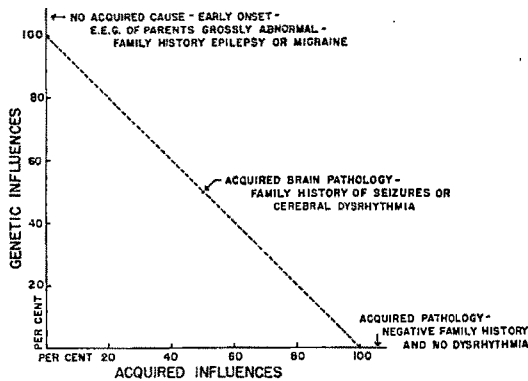


FIG. 1.—Schematic representation of the reciprocating influence of genetic and acquired factors in the etiology of seizures. At the top and at the bottom are patients who might be considered respectively as purely genetic (essential) or acquired (symptomatic) epileptics. The majority of patients, however, would be placed somewhere along the diagonal which represents a combination of genetic and acquired conditions.

important. The proportion of persons who become epileptic as a result of wounds or tumor of the brain may be very high, 50 to 80 percent, a number presumably far above the proportion who are "carriers" of the disorder.

We sought statistical evidence of the relative importance of acquired epilepsy by dividing the 2,000 odd epileptics into two groups—those with and those without a history or other evidence of brain injury which antedated the onset of seizures. In the group having such a history there were 2,714 relatives of whom 1.4 percent were epileptic. Among the 10,152 relatives of the patients without history of brain injury, 3.0 percent

were epileptic (Fig. 2). Therefore, inheritance, as judged by a number of epileptic relatives, is only 40 percent as great in acquired (symptomatic) epilepsy as in genetic (essential) epilepsy. The incidence of epilepsy among relatives, is 3 times greater in the acquired symptomatic group of epileptics than in the general population. Therefore, an "essential" or genetic influence is

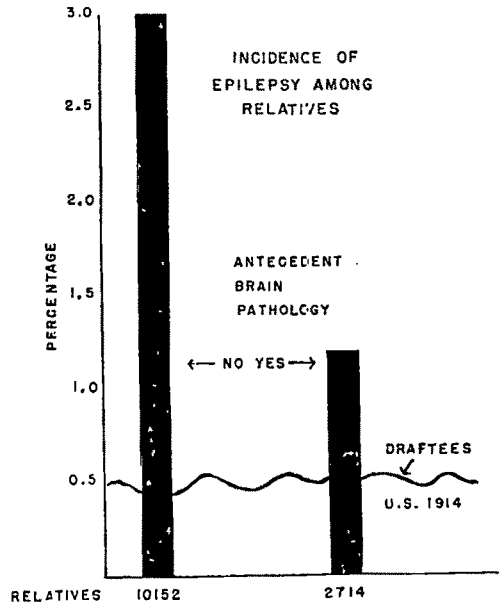


FIG. 2.—The incidence of epilepsy among the near relatives of patients, with reference to the absence or the presence of evidence of acquired brain pathology which antedated the first seizure. The incidence is 3.0 and 1.4 per cent respectively, compared with an incidence of 0.515 among draftees in the war beginning in 1914. The waviness of this line suggests uncertainty regarding the accuracy of this information.

present even in the acquired group. This general fact can be illustrated by numerous case histories in which patients with so-called traumatic epilepsy have a family history of epilepsy.

Sex.—Various conditions may modify the weight of heredity. A constitutional variant of much interest is sex. Long ago Gowers (10) pointed out that epilepsy begins disproportionately early in females, but he attempted no explanation. Our statistics confirm this finding which seems illogical because males are more prone to birth injuries. A possible explanation lies in the fact that

conditions which are predominately genetic in origin tend to manifest themselves early in life. If this is so for epilepsy, those whose seizures began early should have an unusual number of relatives with epilepsy. This proved true in our series. Following is the total number of relatives and the percent who have epilepsy, with respect to the age of the patient when epilepsy began (including isolated childhood convulsions).

Onset	No. of relatives	Percent epileptic
0-4 years	3747	4.5
5-19 years	5170	2.5
20 and over.....	4497	1.2

Epileptic relatives are nearly 4 times more numerous if epilepsy began in the first five years than if it began after thirty years.

Dividing the data on the basis of sex we find that female patients had 5314 near relatives of whom 3.1 percent were epileptic, and male patients had 7,100 relatives of whom only 2.1 percent were affected—a 50 percent excess of female over male.

Investigating the rôle of age at onset with respect to sex, we find that young females have a disproportionately large number of epileptic relatives. This is displayed in the following breakdown of totals.

Age at first seizure	Male patients		Female patients	
	No. of relatives	Percent epileptic	No. of relatives	Percent epileptic
0-4 yrs.	1440	3.4	1307	5.8
5-19 yrs.	2796	2.2	2374	2.9
20 yrs. or over...	2864	1.2	1633	1.2

Thus, among male patients epileptic relatives are nearly 3 times more numerous if the patient experiences his first seizure in the first five years than if it occurs after he is twenty. But among female patients the epileptic relatives are nearly 5 times more numerous. In the youngest group the incidence among relatives is 70 percent greater in girls than in boys (Fig. 3).

In order to check this unexpected finding a different method was used. Patients were divided into three groups—those without epilepsy or migraine in the immediate family, those with one other affected member, and those with more than one. An isolated child-

hood convulsion was not counted as marking the onset.

Relatives affected	All patients		Female patients	
	No.	Average age at onset	No.	Average age at onset
None affected .	1672	15.4	705	14
One affected ..	190	13.9	89	13.1
More than one affected	50	10.7	30	7.0

Here again earlier onset of epilepsy accompanies evidence of heredity, but the relationship is much clearer in female than in all patients.

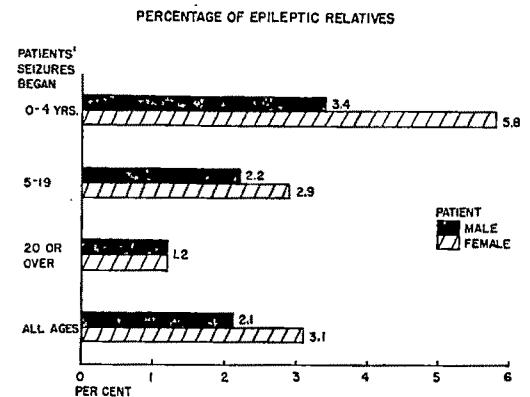


FIG. 3.—Incidence of epilepsy among the near relatives of patients with respect to the sex of patients and their age when seizures began. When seizures began early in life, the proportion of relatives with epilepsy was much greater for female than for male patients.

Type of Seizure.—Obviously, patients who have seizure patterns which are associated with brain pathology (Jacksonian and focal grand mal convulsions) will have relatively few epileptic relatives. Petit mal attacks rarely accompany brain pathology. The genetic influence doubtless accounts for the fact that 4 percent of the relatives of the females subject to petit mal have epilepsy, whereas the proportion for all females is only 3.1 percent.

The higher proportion of epileptic relatives of female patients is due to multiple cases in the family rather than to an unusual number of affected families. No one has suggested that epilepsy is sex linked. The present observations only show that the genetic factor (as measured by the number of epi-

leptic relatives) is greater in females than in males.

Mentality.—The causes of mental defect in epilepsy are multiple(11). In certain individuals such defects may be transmitted, either with or without linkage with the transmitted predisposition to seizures. In our series of cases, the proportion of epileptic relatives varied with the mental state of the patients; 5.9 percent in the small group of patients who were mentally defective at birth; 3.0 percent in patients mentally normal at birth but who later became deteriorated; and only 2.4 percent if mentality was always intact(12).

Here again age at onset seemed to have an influence. If patients were defective at birth and also began to have seizures before the age of five, 9.3 percent of near relatives were epileptic. Sex also played a rôle. In the mentally abnormal group of patients, female patients had twice as many epileptic relatives as male patients.

3. INCIDENCE AMONG TWINS

Twins are especially useful in the study of genetics because identical (monozygotic) twins have the same heredity, whereas fraternal (dizygotic) twins do not. Evidence collected by Conrad(13), Rosanoff(14) and others has demonstrated the frequency of epilepsy in both co-twins if they are identical and its rarity in both if they are fraternal. We have studied 55 twins affected by seizures. The percentage of twin pairs in which both co-twins were epileptic was 94 percent in the monozygotic group without evidence of brain pathology, and only 17 percent in the monozygotic group in which the epileptic co-twin had evidence of brain pathology. Only one of the dizygotic twins had epilepsy in both co-twins.

Though the groups are small the results give convincing evidence of the importance and the interrelation of both genetic and acquired factors.

4. THE BRAIN WAVE TEST FOR CARRIERS

The "predisposition" to epilepsy is a nebulous quality, a subject discussed and argued through the ages, but never observed. Like an unseen plane, its presence is postulated

but not proved. The fact that persons subject to seizures display individuality as well as great irregularity in the pattern of the electrical waves coming from the brain suggested to us that wave patterns be studied from the standpoint of genetics. To that end, with the aid of the Committee on Human Heredity of the National Research Council, Dr. and Mrs. Gibbs and I(15) made electroencephalograms of 71 "normal" twins and found the brain wave design, like finger prints or the color of hair and eyes, could be counted as an hereditary trait; the brain wave records of normal monozygotic could not, and those of dizygotic twins could be distinguished.

Abnormality of rhythm is present in three-fourths or more of epileptics and oftentimes in patients who are without evidence of brain pathology and at the very onset of their illness. Therefore it occurred to us that irregularities of the brain waves might constitute the long debated predisposition. To test this theory we have recorded brain waves of 470 near relatives of epileptics, including both parents of 140 patients. We have also studied 55 twin pairs affected by seizures (16).

A little reflection will temper any expectation of securing a conclusive answer through this laboratory technique; the brain wave pattern is a trait which may have been altered by some acquired pathology or pathophysiology of the brain, and which is a fluid trait changing with the activity of the brain. Furthermore, a certain proportion of undoubted epileptics have a normal brain wave pattern and abnormalities, when they exist, differ in degree and in specificity. If a person has dysrhythmia without history, symptoms or neurological signs of pathology of the brain, or at the time of the examination does not have severe alkalosis, anoxemia or hypoglycemia, or other metabolic disorders associated with dysrhythmia, his disordered potentials are doubtless genetic in origin.

Paroxysmal "seizure discharges" (high voltage waves either abnormally slow or fast) are especially significant of epilepsy. In the group of 470 near relatives some degree of abnormality was observed in 50 percent against 16 percent in an adult normal

"control" group. Rhythms which were mildly slow or fast were 2.6 times more frequent in relatives than in controls; very slow or fast rhythms were 6 times; and seizure discharges 8 times more frequent(12).

More pertinent, but more complicated, is information derived from examination of the brain waves of both parents. Electroencephalograms were made of both parents of 140 patients. In 24 percent, the records of both parents were in some degree abnormal. This is approximately 12 times the corresponding percentage for chance matings from the control group. In 25 percent of the families, one or both parents had a grossly abnormal record, either seizure discharges, or dominant rhythms which were very slow or fast. Details are in a previous article(12).

Most significant is information derived from electroencephalograms of twins. A study of 55 twin pairs affected with seizures will be presented elsewhere(16). In the group of identical twins in which one of the co-twins has epilepsy and cortical dysrhythmia, the brain wave record of the normal co-twin is almost always abnormal also. In identical twins also, the epileptic co-twin almost always has evidence of having experienced an acquired injury of the brain.

SUMMARY

Study of the incidence of epilepsy among 12,119 of the near relatives of 2130 epileptics and among 55 twin pairs affected by seizures, together with analysis of the brain wave records of 470 relatives and of the 55 twins, leads to the conclusion that epilepsy *per se* is not inherited but a tendency or predisposition usually is inherited. The terms, genetic and acquired epilepsy, should replace the meaningless conventional terms essential and symptomatic. Probably in most patients both genetic and acquired factors are present. The incidence of epilepsy is higher among the near relatives of epileptics if pathology of the brain did not antedate the onset of seizures, if the patient's epilepsy began early in life, if he was mentally abnormal at birth, if he has petit mal and if the patient is female.

The electroencephalogram is an hereditary trait and brain wave tracings, properly made and interpreted, may be of positive value in visualizing a transmitted quality which (with

the possible help of acquired pathology or pathophysiology) may eventuate in epilepsy. The practical value of this evidence is limited, because cortical electrical activity is a fluid trait, dysrhythmia cannot always be demonstrated in patients, and tracings of relatives may display only minor deviations from normal. Therefore, negative electroencephalographic evidence may not be significant.

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THE NEUROPSYCHIATRIC PROGRAM OF THE VETERANS ADMINISTRATION¹

DANIEL BLAIN, M.D.,² AND JOHN H. BAIRD, M.D.³

As a prelude to more detailed discussions to follow by Special Section heads of the Neuropsychiatric Division, I propose to outline briefly the over-all plan necessary to fulfill the obligations of the Veterans Administration to its neuropsychiatric beneficiaries, the policies on which these plans are based, the scope of the responsibilities of the NP Division and a report of the progress to date with a forecast of the speed with which these obligations will increase.

I. To orient you with the plan of organization of the medical functions of the Veterans Administration and especially the rôle played by neuropsychiatry in carrying out its functions, I have had prepared three slides. The first one shows the divisions of the professional services which are under the general supervision of the Chief Medical Director. You will note that there are four main divisions, General Medical, Surgical, TB and NP. The Central Office Medical Service is the policy making body for the entire Veterans Administration.

The second slide shows the sub-sections of the NP Division, with Special Assistant for Personnel, a Section having to do with editorial work, statistical reports and regulations, and six special sections concerned respectively with neurology, clinical psychology, psychiatric education, outpatient functions, inpatient activities and research. You will note also that the NP Division maintains close liaison with the Social Service and Nursing Departments.

The third slide represents the extension of Central Office functions to the field, through the 13 branch offices in the 13 areas covering the country. In each branch office there

is authorized a full-time Chief of the NP Service and also a part-time Senior Consultant for NP. These psychiatrists direct the NP activities in the Regional Offices, Outpatient Treatment Units and Hospitals in the area concerned. There are also to be assigned specialists in neurology and psychology in the Branch Offices, the neurologist as a part-time consultant and the psychologist full-time. You will note that all GM & S hospitals are to have NP Sections in them and that all NP hospitals are to have GM & S Sections.

Of signal importance in the over-all planning of the NP Division is the creation of an Advisory Committee composed of 23 outstanding and nationally known psychiatrists, neurologists and representatives of social service and psychiatric nursing. This committee had its initial meeting in Central Office the last of April when many important policy matters were discussed and decisions were made. It is planned that the committee will meet in Washington with Dr. Blain and his staff at least three times a year. The advice of the entire group as well as of smaller committees of the group will be sought from time to time by correspondence and personal contact. They will also be available to advise field stations direct.

II. It is our belief that the most important policy that has been established by the NP Division is a thorough integration of psychiatry with internal medicine and surgery which should unquestionably reflect in improved over-all care for all types of patients. Of scarcely less importance is the policy of the broad extension of outpatient facilities for the treatment of the functional illnesses which will insure a concentration on psychiatric problems at their source rather than upon the end results requiring prolonged hospitalization.

Other important policies which have been adopted and which are being realized as rapidly as circumstances permit are:

(a) The education of physicians in the spe-

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cialties of psychiatry and neurology through the residency program and in service training and encouraging them to become certified by the American Board of Psychiatry and Neurology.

(b) The education of the public in the prevention of psychiatric illness through publicizing the program of the Veterans Administration for those requiring treatment.

(c) Individualization of the patient with psychiatric disability in the minds of all persons whose responsibility it is to serve him, through training courses in all hospitals for physicians, psychologists, social workers, nurses, dieticians, physical therapists, occupational therapy aides, chaplains, librarians, attendants, etc.

(d) The provision of adequate NP facilities in general medical and surgical hospitals and adequate general medical and surgical facilities in NP hospitals.

(e) The greater use of ancillary medical personnel in general; social workers, aides, psychiatrically trained nurses, etc.

(f) The use of clinical psychologists, not only in Mental Hygiene Clinics but also in General, TB and NP hospitals.

(g) The close association of all NP installations with medical teaching centers insofar as is possible.

(h) The modernization and extension of treatment units for veterans with tuberculosis who are also psychotic.

(i) The development of special treatment facilities for the disorders of old age.

(j) Reducing to a minimum the administrative duties of physicians in hospitals to allow them more time with their patients.

(k) The development of a program of foster home care for selected psychotics and an extension of the trial visit program generally.

(l) The extension of the use of consultants in psychiatry and neurology in all field stations.

(m) The endorsement of the much improved physical therapy and recreational therapy programs for NP hospitals now being developed.

(n) The raising of the standards of qualification for attendant personnel in NP Units.

(o) The development of an enlightened program of treatment for chronic alcoholics.

(p) The establishment of special treatment centers for aphasic speech disorders and for epileptics.

(q) The raising of the standard of care for psychotic patients.

(r) The simplification of regulations and procedure governing the handling of psychiatric problems which will permit field stations to operate more independently.

(s) The provision of adequate treatment facilities for women with NP conditions.

(t) The development of a logical building program with attention to placing new units near medical centers and utilization of the best professional and architectural talent available to ensure ideal structural plants.

(u) The careful study of medico-legal matters in order to bring about needed reforms and more uniform procedure.

(v) The establishment of Convalescent Treatment Centers for the inpatient treatment of severe psychoneurotics.

(w) The development of Rest Centers for the care of certain borderline cases among veterans who do not require formal hospitalization but who need more attention than can be given in outpatient clinics.

(x) The encouragement of the greater use of properly indoctrinated volunteer workers in hospitals.

(y) The development of the use of general practitioners in sparsely populated areas and their training in the fundamentals of psychiatry.

(z) The adoption of a more comprehensive and definitive nomenclature of psychiatric disorders.

III. It is difficult indeed to comprehend the magnitude of the medical responsibilities of the Veterans Administration toward veterans with NP disorders of World War II and prior wars, in the form of hospital and outpatient treatment, to say nothing of the medical examinations required for the determination of eligibility for monetary benefits, *i. e.*, compensation, pension, retirement pay, insurance, eligibility for vocational rehabilitation, feasibility for a particular type of training and outpatient treatment of veterans during such training.

The number of living veterans of World War I and earlier wars is estimated as about 4,066,000. The general estimate of the num-

ber of persons who have served in the Armed Forces of World War II is about 15,000,000. This roughly makes a total of nearly 20,000,000 persons who are potential beneficiaries of the Veterans Administration. Many more women, nurses, Waves, Wacs, Spars and Marines will be eligible for Veterans Administration medical care than was the case following earlier wars.

I shall now show a few slides which I believe will give you some idea of the size of the NP program. The first slide shows the separations from the Army for NP conditions, between January 1, 1942, through June 30, 1945. There were 320,000 granted medical discharges (CDD) because of NP disorders. This represented 41% of all medical discharges. In addition 137,000 men were discharged for NP disorders under a non-medical category which includes mental deficiency, psychopathic personality, enuresis and certain other conditions. Taking into account both medical and non-medical categories, a total of 457,000 men were discharged from the Army for NP disorders, from just after Pearl Harbor through June 30, 1945.

Approximate figures from the Navy covering about the same period show that 106,600 were discharged for NP disorders. This number does not include persons with borderline psychiatric conditions discharged under non-medical categories. This makes a total of 563,600 discharged from the Army and Navy for NP disorders through last June.

The next slide shows the service connected NP cases on compensation and pension rolls, as of the last of the calendar year 1945. The figures for World War I and World War II are not comparable since the figure for World War I represents only the residual number receiving compensation. There is no register maintained showing the total veterans of that war who have been compensated for NP disorders. However, you will note the very high percentage of World War II veterans with NP disorders on the pension rolls who are listed in the functional or psychoneurotic group.

The next slide shows the number of authorized beds in all NP hospitals and the number of patients hospitalized as of April

18, 1946. This slide also shows the total number of admissions to all veterans hospitals and contract hospitals for NP disorders during the period July 1, 1944, through June 30, 1945.

The last slide shows the projection of possible hospital loads to 1975, by five year periods. You will note that it is predicted that there will be a steady increase in the number of veterans with NP disorders to be provided for until 1965 or 1966, approximately 20 years hence.

IV. Now finally as to the progress made to date in the accomplishment of some of our objectives, I might mention the following:

(a) The organization of a smooth running team of psychiatrists, psychologists and lay assistants in the NP Division with close association with social and nursing services.

(b) The functioning of the Advisory Committee to the NP Division which has already resulted in the initiation of a number of needed reforms in medical practice in the Veterans Administration.

(c) A broadening of outpatient treatment units both in our own Regional Offices and under contract with established clinics.

(d) A reclassification of Social Worker positions ranging in the field from P-2 (\$2980) to P-5 (\$5180) and the establishment of Chief Social Worker and Case Supervisor positions. The social worker strength has increased from a total of approximately 150 on duty a year ago to nearly 500, with 300 more positions authorized. About ten schools of social work are placing students in our stations for their field work (1st and 2nd year) and plans are being worked out with about twelve more schools for similar placements.

(e) The liberalization and simplification of certain regulations concerned with the care of NP patients.

(f) The beginning of a psychiatric educational program for physicians, and other professional and non-professional personnel, including contact men and women to whom the veteran goes with a variety of problems.

(g) An educational program for veterans with emotional ills urging them to seek psychiatric help early.

(h) The formulation of an educational and treatment program in neurology in co-

operation with the American Neurological Association.

(i) An expansion of the in-service psychiatric nursing educational program in each NP hospital under the direction of a nurse instructor who functions under the general supervision of a nurse specialist in neuropsychiatry in Washington. Seventeen NP hospitals are approved for senior cadets and 3 are accepting affiliate student nurses.

(j) The advantages resulting from the decentralization program which in the main are as follows:

1. A more immediate contact between the field station and the administrative authority.

2. The greater familiarity of the Branch Office with local situations than has been possible with Central Office attempting to supervise the activities throughout the entire nation.

3. The greater ability on the part of the Branch Office to effect needed changes more promptly through surveys of a different type than have ever been conducted in prior years by Central Office.

4. The Branch Office working in close and continuous cooperation with the field stations thus furthering the best interests of all patients served.

(k) The setting up of residencies under the auspices of Deans' Committees and professors of neuropsychiatry offers intensive and supervised training in the specialty to interested physicians.

As to a forecast of the speed with which our obligations will increase, I have shown the estimated probable hospital requirements for veterans with disabilities requiring in-patient care. However, we feel that ultimately there will be a far greater number of veterans who will need and desire psychiatric treatment administered in outpatient departments. This likelihood is more impressive when one considers the great number who are already rated as service connected for psychoneurotic disorders. Then too, one has no way of estimating the number of veterans with general medical or surgical disorders who will need psychiatric treatment for concomitant NP conditions.

CARE AND TREATMENT OF THE PSYCHIATRIC PATIENT IN THE VETERANS ADMINISTRATION¹

HARVEY J. TOMPKINS, M.D.,² AND ALFRED W. SNEDEKER, M.D.³

Much has been said concerning the present and anticipated neuropsychiatric load of the Veterans Administration. The quoted figures are impressive; admittedly our present personnel and facilities are too few. Of necessity the problem of proper care of our patients in clinics and hospitals has been undertaken with a disquieting knowledge of current limitations. Our approach, therefore, has been realistic without sacrificing the objective of adequate and modern treatment. Much planning has been done and now four months after the passage of our "Enabling Act" we are gradually implementing what we believe to be sound policies.

There will be continuing insistence on placing Veterans Administration Hospitals near medical centers, the greatest single aid to the proper care of the patient. If it is demonstrated conclusively that our present medically isolated hospitals cannot be adequately staffed, we will not hesitate to recommend that patients be moved to a more favorable location.

We are working on the building plans for new hospitals and have been able to incorporate progressive ideas in the construction of neuropsychiatric installations, with the intent of providing the best environmental surroundings and facilitating the practice of modern therapy. The general appearance will be non-institutional. The design of the buildings is functional and represents the best in present day ideas in architecture.

All general medical and surgical hospitals to be newly built or acquired will have at least 30% of the total beds allocated to the NP service, which will be approximately equally divided between the psychiatric, neu-

rological and convalescent sections. The convalescent section will care for the psychoneurotic who cannot be successfully treated on an outpatient basis but does not require formal hospitalization. The section is to be located in a separate building if possible or, if not, on the lower floor and as far from the psychiatric section as is structurally feasible. Every effort will be made to provide a non-hospital atmosphere. There will be adequate facilities for a complete activities program.

Each section of the neuropsychiatric service will be headed by chiefs, all of whom will be responsible to the Chief of the Service who will have a status equal to that of the Chiefs of Medicine and Surgery. The neuropsychiatric activities in present general medical and surgical hospitals are to be similarly developed as far as facilities and available personnel permit. It is our policy to hospitalize the maximum number of NP patients in general hospitals rather than in special NP hospitals, recognizing the fact that a large proportion of NP problems in veterans can be treated, and treated more successfully, at the general hospital level. The development of this program should give inestimable aid to the bringing of psychiatry into general medical and surgical wards everywhere.

The so-called specialized neuropsychiatric hospitals are to have two self-contained units, acute and continued treatment. In addition, there will be adequate general medical and surgical sections to care for the veterans of the community as well as the hospital population. An existing hospital has been changed to the acute and continued treatment plan as a "pilot" and we have been sufficiently encouraged to consider similar changes in other specialized NP hospitals. It may be that at this time it would be appropriate to consider completely discarding the two appellations "General Medical and Surgical" and "NP." As you may know, except for purely statistical purposes, the Veterans

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Administration now calls all its hospitals simply "VA Hospitals."

The need for increased facilities for women veterans is recognized with the allocation of 2% of new beds. In hospitals principally for NP patients the proportion is 5%. We anticipate this percentage because of relatively inadequate NP screening of women in the Armed Forces during World War II.

NP TB patients will be treated in hospitals properly staffed and equipped and strategically distributed throughout the United States. These hospitals will be under neuropsychiatric supervision coordinated with the Tuberculosis Division of the Department of Medicine and Surgery.

Family care is being developed. It is proposed to pay \$10.00 per week for each patient boarded out. The hospital will continue to be responsible for adequate supervision of each patient.

A continued attack is being made on eliminating non-medical duties for doctors and nurses with heartening progress, despite obstacles inherent in any governmental agency which, we have found, are not always insurmountable.

The Nursing Service is intent on providing the best nursing care, and realizes that this can be done only by increasing the knowledge and skill of the nursing staff. Training programs have been established for instructors, head nurses, staff nurses, cadet student nurses, affiliated student nurses and attendants. The value of the properly trained attendant in the therapeutic program is recognized and every effort is being made to improve his status. The training of the attendant in the Veterans Administration is based on the manual compiled by the nursing committee of the A.P.A. The program has been approved by the National League of Nursing Education.

The Social Service Division of the Veterans Administration works closely with the NP Division. A representative from the Social Service Division sits in on our policy-making meetings and correlates social service programs with that of the general NP Division. Social service plays an important rôle in our treatment plans. For example, in our anticipated family care program, we will be relying upon the social worker's skill in finding foster homes where, in addition to good

physical care, the patient will have the proper psychological environment. We will also rely upon social service for supervising the families giving patients such care. The social worker is an integral part in all aspects of the NP program: in hospitals, convalescent sections, mental hygiene clinics, and in rural work. The proper training of these workers is important. We are, therefore, heartened to know that such programs are under way, both for social workers already employed and for those who are still in training.

Every hospital will have a complete medical rehabilitation program supervised by a specifically qualified medical officer. This service will include the department of physical medicine, which will be complete and well equipped for the treatment of various types of disabilities with all the modalities used by psychiatrists. There will be corrective physical rehabilitation personnel who will specialize in the corrective training so successfully utilized in the armed forces. Another important unit in the rehabilitation service is that of educational retraining where a wide variety of subjects can be studied. There will be a staff of instructors who will teach courses and assist with individual studies. The United States Armed Forces Institute has made available to the VA 175 different courses for correspondence work and self-study with academic credit available for work accomplished. There will be an extensive shop program in each hospital. In these shops the patient will have a rather wide choice of work he may wish to do for the rest of his life. This is really pre-vocational training and it leads to a continuous process of rehabilitation.

Representations are being made to provide adequate housing and recreational facilities for hospital personnel, needs which are not being met at this time and threaten the entire treatment program due to their adverse effect on recruitment and the morale of our personnel. Organized public opinion could render great aid in correcting this situation.

In addition to our hospital plans it is, of course, necessary a program be developed that is designed not only to alleviate minor neuropsychiatric illnesses but to prevent the development of more serious ones and thereby reduce in number the veterans re-

quiring hospitalization. This will be particularly true where a somatic complaint is the symptom of a mental illness.

Outpatient care is being provided and planned in several ways. The Veterans Administration is to have its own Mental Hygiene Clinics in a number of the larger cities. Thirty-two have been authorized, but we expect that this number will be increased. Thirteen clinics are already functioning. A few have complete staffs in full swing, some are only partly staffed and others at the stage of preliminary spade work. All are seeing some patients, but the general program is still in the initial stages of implementation. However, several clinics have been functioning for a sufficient length of time and with adequate personnel to confirm the original estimate of the need and effectiveness of treatment.

Rapid organization is impeded by the scarcity of personnel, including psychiatrists, psychologists and social workers, as well as by difficulty in obtaining space in convenient locations.

Contracts are being made with established Mental Hygiene Clinics usually in the larger urban areas. Contracts with fourteen such clinics have been made, and a score or more are at the present time pending or under consideration. These clinics accept anywhere from two or three to thirty or more new patients per month and carry caseloads up to fifty or sixty. We should like to receive proposals from a great many more clinics, through our local sub-regional or regional offices. Direct applications can also be made to the Central Office in Washington.

Efforts are being made to employ neuro-

psychiatrists on a fee basis particularly in areas where neither of the previously mentioned services is expected to be available. Action is also being expedited at present to secure the services of neuropsychiatrists under the so-called state plan. Contracts are being made with responsible agents of State Medical Societies whereby members are employed on a fee basis, so that, if there are no VA services conveniently at hand, the veteran may select his own doctor.

The employment of psychiatrists on a fee basis either directly or through the state plan is being developed primarily for the needs of the rural areas where the population is not sufficiently dense to warrant clinics but where hospitals and sanatoria with competent neuropsychiatrists are frequently located. In addition, we are planning to use the services of various traveling mental hygiene clinics.

As indicated previously, the policies being developed and followed in regard to both inpatient and outpatient care of neuropsychiatric disabilities are intended to be progressive, comprehensive and sound. Our personnel individually or in groups have the opportunities of exploring all legitimate avenues of treatment. Our residency training program will enable us to give concentrated and individualized care to patients with disorders particularly amenable to therapy. The doctors will pursue their duties with the encouragement and under the direction and supervision of professionally qualified superiors. It is expected that with our great amount of clinical material we will be able to make a real contribution to modern neuropsychiatric treatment.

THE NEUROPSYCHIATRIC TRAINING PROGRAM OF THE VETERANS ADMINISTRATION¹

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I

The training of specialists in all of the various fields of medicine through the joint efforts of a government agency and the medical schools is an adventure in administration and education that calls on the experience and wisdom as well as the patience, forbearance and the experimental attitude of the great body of doctors joined together in this effort. There are no precedents for this—only the traditions of our profession. Like all advances in medicine, it has come about in answer to a need that shouts from the house tops as well as almost any popular magazine one happens to open.

The needs in psychiatry involve three interrelated categories of problems: the shortage of psychiatrists, the body of knowledge which comprises our specialty, and the methods we use in teaching. As to the shortage, we need only look to a few figures. The proportion of hospital beds for neuropsychiatric cases in the Veterans Administration is approximately the same as in the general population—slightly over 60%. In addition we anticipate a very large outpatient load. We do not know the number of veterans suffering from the psychoneuroses but we do know that almost a quarter of a million veterans of World War II, as of December 31, 1945, were receiving pensions for "functional nervous diseases," the category used for the psychoneuroses.

Where are the doctors to come from who will take care of these patients? At present the psychiatrists listed by The American Psychiatric Association constitute approximately 2½% of the total number of doctors in the country. What else can this mean but that every doctor qualified not only to care for patients but in teaching has a part in this effort. This applies not only to our residency

program but to the undergraduate medical school. Students must learn what modern psychiatry is, what a challenge it presents and what wide variety of medical interests are served in this specialty.

Our training plan is just beginning to operate. We hope to educate 1000 residents in the next three years. The Veterans Administration will pay for the program but we ask the medical schools to be responsible for the teaching, carried on however with our active cooperation. Doctors who are veterans have preference for places. Each prospective resident must have had at least a year's rotating or medical internship. The residencies will be from one to three years and the men must have the intention of taking training sufficient to meet the Board's requirements for certification. Basic training in the necessary sciences and in neurology are included. There can be no legal obligation to continue in the Veterans Administration. We hope that the men will feel a moral obligation to stay and we believe that the service will be so good that they will want to.

We have tried to work out plans that require a minimum of recording and reports, and allow the necessary amount of flexibility to deal with different situations. We ask only for that which is required to carry out the law and keep the Central Office informed in general. The millennium has not been reached but we are doing the best we can.

The deans of the medical schools in any locality constitute a dean's committee for residency training in all the specialties. If there is only one school, the dean, of course, acts alone. This committee then appoints a sub-committee on neuropsychiatry, usually consisting of the professors of psychiatry in each school, but others may be added. This neuropsychiatric committee selects and recommends the residents and the part-time teachers, and works out a curriculum. Although the need is so great, it would not be met if the quality of the men selected for

¹ Read at the 102d meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

residents was sacrificed for quantity. Several medical schools are working on the problem of selection, and Dr. James Miller with the staff of Winter V. A. Hospital are also at work on it. Since a complete, well-rounded course cannot be given at the veterans hospitals, necessary experience which cannot be obtained there may be had elsewhere, but at least 50% of the time of the resident must be spent with veteran patients. This time may be divided in whatever way is most feasible and gives the best training in the particular circumstances involved. Teaching in the Veterans Administration hospitals is carried out by the consultants and attending psychiatrists and one or more full time teachers under the supervision of the professors of psychiatry in charge of the work, and is an integral part of the teaching program. This teacher, who is called the director of clinical psychiatry, also has charge of an active treatment service which we aim to keep small so as not to interfere with his teaching duties.

In addition to the teaching of residents, we are deeply interested in in-service training. Many junior and senior physicians who have worked hard and well under the most trying conditions are eager for more training. Because we are short staffed, it is not possible at present to give them leave for study elsewhere. We must do as much in-service training as possible. All teaching rounds and discussion groups are open to the entire staff and when possible men will be given time to attend a specific course outside of the hospital to supplement this. Hospitals too far from medical schools will, wherever possible, be visited once a month or oftener by members of the nearest faculty for a day of rounds and clinics. Or a visiting doctor may hold a series of clinics for a week at a hospital and as many doctors from the area are brought in as is feasible. We believe that the caliber of this over-all teaching program, initiated and supervised by the psychiatric departments of the medical schools, will merit approval as training hospitals by the Board, and that it will attract men who want to learn and doctors who can teach.

It should now appear why a few moments ago I called this program an adventure. Most medical schools have used the limited

services in local city or county hospitals for their undergraduate teaching in psychiatry. The number of internships available there are few. The most sought for general residencies, by and large, have been in the university hospitals, very few of which have psychiatric services. So, in the main, most psychiatrists had to get their experience in hospitals with little formal teaching and little supervision or case discussion. This was slowly beginning to change in the thirties, but it took the war with its overwhelming need for psychiatrists and the recognition of this need by the medical profession to bring about such a program as I have described, as well as others carried out under local auspices. The great opportunities in the large Veterans Administration hospitals and clinics provide the locus for such training and the participation of our medical schools provide an integrated teaching program.

This brings us to the question of the content of the training and the methods of teaching to be used. Our emphasis on the well-trained teacher and a definite curriculum does not mean that we are interested in a rigid system of courses, spoon-fed to groups of passive nonentities. Psychiatry is the possessor of an enormous and rapidly increasing body of experimental and experiential observations and facts, for the most part ill-digested and poorly integrated. This naturally leads to widely varying theories and basic philosophical concepts, and from this lively rivalries develop. A healthy state to be in as long as we don't stay there. We are like adolescents with new experiences and concepts of the world impinging on them which they must understand, test and integrate if they are to mature. We have the same job if psychiatry is to progress. There have been signs in the literature and in our discussions that such progress is being made and our training must recognize it and aim to increase it.

Therefore, the emphasis must be laid on the fullest possible discussion of carefully made observations, on the development of new theories as well as the study of old ones and on their testing. This is a process in which teacher and pupil are only distinguished by the longer experience of the former and by the attitudes toward patients

which practice has taught them. The historical foundations of our science and art need to be studied—but as a spring board from which to go on.

How to do this best, we have yet to learn. Since the inauguration of clinical clerkships there has been no outstanding advance in methods of teaching. Perhaps the group experimenting with the short courses in psychiatry for general practitioners under the Commonwealth Fund will find new methods—perhaps some of our own hospitals will. Once the need is recognized we can expect advances in this field also.

Training in psychiatry under the Veterans Administration can only be as good or as poor as the medical schools make it. We will give whatever funds and cooperation the law permits. We have an Advisory Committee on Education from whom recommendations may be expected from time to time. We are appreciative of the opportunity to serve as a clearing house for experiences and perhaps at times as a touchstone for further advances.

II

We also construe psychiatric education to include non-professional employees and to some extent the patients and their families. Everyone who comes in contact with a patient should understand enough of the situation to be able to help the patient by his attitude and behavior. Ignorance and fear need to be overcome, and experience shows that valuable returns are obtained from a relatively small amount of time spent in teaching lay personnel. This includes every employee of the hospital and clinic.

In addition, there are the contact men and women—employees to whom a veteran goes with any problem, to find out what kind of aid he can get and where and how he can get it. Every town and village has one such person and cities have many of them. We have prepared three film strips to use in their training—one to give some understanding of the neurotic and psychotic behavior they encounter, another on how to handle it under the circumstances in which they operate and one to help them with their own emotional reactions to difficult contacts. These strips will be cut and rearranged for use with other lay groups. An illustrated pamphlet for contact men and a simpler one for other employees have been written.

We have asked the hospital managers to arrange for discussions with groups of families of patients where possible. Unfortunately, there have never been regular visiting days which makes this difficult.

In regard to patients, we feel that group discussion of their problems at an intellectual level has some value, though limited, and is not a substitute for either individual or group therapy.

Perhaps, our most important educational problem—certainly one of the most difficult to approach—is the education of the veteran to seek psychiatric help early, to understand that going to a mental hygiene clinic does not mean that he is “psycho,” and to get the cooperation of medical and surgical men in this. Of course, since the veteran is one-sixth of our population, that means many more psychiatrists to be trained—so we have come back to the point at which this paper started.

THE NEW RÔLE OF PSYCHOLOGICAL TESTING IN PSYCHIATRY¹

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It is common knowledge that the systematization of psychiatric nosology was begun by Kraepelin, but it is unfortunately not commonly appreciated that the cradle for this systematization was built in the psychological laboratory of Wundt. The journal *Psychologische Arbeiten* published by Kraepelin (as well as Kraepelin's own volumes, particularly the *Manic-Depressive Insanity and Paranoia*) bear witness to the fact that Kraepelin observed fundamental differences in the basic psychological functions of different types of psychiatric cases and hoped that it would prove possible to distinguish between them by means of psychological laboratory experiments. Perception, attention, consciousness, memory, retention, train of ideas (the thought process), associations, inhibition, mental efficiency, mood, pressure of activity and speech, degree of excitability—these were some of the functions Kraepelin considered fundamental.

However although it was Kraepelin who envisaged these psychological functions as fundamental he did not proceed to organize them into a consistent framework from the point of view of psychopathology or psychology proper. The list just cited confuses functions with phenomena (*e. g.*, attention as a function and inhibition as a phenomenon); it also includes functions not clearly distinguished from one another (*e. g.*, memory and retention). Further, the so-called "fundamental" psychological functions as listed by Kraepelin include many symptoms, such as hallucinations and delusions.

Bleuler, the other fountainhead of modern psychiatry, was much more clear-sighted in this respect. In his rarely read and untranslated volume *Dementia Praecox or the Group of Schizophrenias* he distinguished the fundamental or *primary* symptoms of schizophrenia from its secondary

symptoms. As primary symptoms he included the association disturbances, the affect disturbances and the ambivalence, with corollary disturbances in perception and apperception, orientation, memory, consciousness, motility, reality appraisal, attention and will; and as the *secondary* symptoms he listed sensory illusions, delusions, catalepsy, stupor, negativism, mannerisms, hyperactivity, automatism, echopraxia, impulsive acts, confusion, twilight states, deliria, and fugues. According to him the primary symptoms preceded the secondary ones in time—often by a considerable period—hence he considered the early detection of these primary symptoms to be the prime diagnostic task in schizophrenia. Bleuler relied partly on the word-association experiment and partly on the interview to establish the presence or absence of such primary symptoms. Like Kraepelin, he hoped that psychological experimentation would become the tool for detecting disordered functioning before gross and overt mental disorder develops.

We are therefore justified in asking what progress has been made to date in wake of the initial ideas of these two thinkers. The balance sheet one can draw up from modern textbooks of psychiatry indeed provides a disappointing answer. Interest in psychological functions (in the sense quoted above from Kraepelin and Bleuler) did not increase; in fact it *decreased*. There seem to be two good reasons for this. The reasons lie in the retardations in the development of psychiatry on the one hand and in those of psychology on the other.

On the side of psychiatry for a long time the prevalent nosology was arbitrary and not based on the etiology of the disorders, and therefore any differential diagnostic technique was doomed to failure. Psychological experiment could be no more useful than the framework in which it was applied. Interest in psychiatry subsequently, and to some extent consequently, shifted to etiology

¹ Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

of mental disorder and the new emphasis fell partly on neuropathology and partly on psychopathology of psychoanalytic orientation.

On the side of psychology, it must be remembered that the laboratory of Wundt, whence Kraepelin's work emerged, was also the cradle of experimental psychology. Psychology was at its very beginnings. The functions and phenomena it proposed to investigate were not yet well defined. How could these ill-defined functions have been the basis for sound diagnostic differentiations, even if they had been applied to etiologically-clear nosological entities? They were not applied, however, and the result was discouragement, reflected in the literature by futile, unsystematic attempts and by loss of interest.

The integrating of the efforts of psychiatry and psychology had to be postponed until more etiological clarity had been achieved in psychiatry and more theoretical maturity had been reached in psychology. Thus, the ways of the two disciplines, once so closely linked, parted. The distance between them grew particularly great when psychiatry's interest in dynamics and etiology became all absorbing, *e. g.*, in psychoanalysis; and when psychology's paramount interest became theoretical, *e. g.*, in gestalt psychology.

In the meantime, however, psychological testing, issuing from a cradle different from the common Wundtian cradle, developed on its own and served as a temporary liaison between psychology and psychiatry. It was first confined to intelligence testing, later to aptitude testing and to the questionnaire method of personality testing. Yet, all the while, it again and again used the association experiment and, under the fructifying influence of dynamic psychiatry, it also developed what is commonly called projective testing.

Today, psychological testing has reached an unparalleled development in this country and has proved that it is here to stay. Yet for a long while it suffered under the same handicaps which doomed to failure the early attempts at joining the efforts of psychiatry and psychology. It set out first to appraise intelligence before the concept intelligence was systematically understood. In the absence of systematic understanding, pragmatic

application, always handy, was the result. In general, intelligence tests were applied only to make pragmatic distinctions between degrees of mental ability and efficiency. This remained the case until recently, even though for the last 35 years efforts were also made to study the qualitative relationships between different parts of intelligence test performance and different types of adjustments and maladjustments, as well as the qualitative relationships between different types of responses on the word association test and different types of disorders. These efforts of psychological testing were also handicapped, as indicated above, by the continuing lack of nosological clarity in psychiatry, and also by the fact that validation of diagnostic indicators was precluded by the conflicting and inconsistent diagnostic criteria used in state hospitals, the usual source of cases for research. An additional handicap was the statistical-pragmatic construction of intelligence tests, without a theoretical orientation. As a matter of fact even most of the currently popular projective tests were developed as pragmatic procedures (excepting perhaps the play techniques which were based on the concept of the projection mechanism and which used psychoanalytic interpretive principles). The Rorschach Test and the Thematic Apperception Test developed without theoretical clarity as to the processes involved in producing the responses and as to the laws governing the relationship between response and personality makeup. Yet old-timers in clinics well knew that there are qualitative relationships between test performance and specific diagnosis, and had hunches as to how the development of a story or response comes about differently in different types of people and in different types of sick people. This knowledge, however, remained either anecdotally, or not at all, recorded. So the Kraepelin-Bleuler heritage, the idea that changes in psychological functions or their relationships is characteristic and therefore diagnostic of different types of disorders, remained all but forgotten even with the advent of general interest in testing.

Psychiatry, however, has begun to approach greater etiological clarity—even though it is far from having solved its nosological problems. Similarly, psychology has

grown out of its mechanistic childhood boots; and its developmental, comparative and experimental as well as theoretical achievements set at least a baseline against which evaluation of efficiency of functioning can be made. In psychological testing new advances have been made, not only in the sense of developing more, new, bigger and better testing procedures, but also in the sense that interest has arisen in the functions that go into achievements or reactions on different tests.

Therefore the time appears to be ripe once again to raise the Kraepelinian and Bleulerian questions: what psychological functions are selectively impaired in different mental disorders; and can we, and how are we to, establish the presence or absence of the primary symptoms of mental disorder before the gross, secondary symptoms are clinically conspicuous?

Diagnostic psychological testing can help answer these questions, motivated as it now is to approach every case with these questions in the back of its mind. It has the advantage over clinical observation in that it has completely recorded segments of the patient's behavior at its disposal, and through the study, scoring and evaluation of these segments it makes possible quantitative inter- and intra-individual comparison of those psychological functions which go into producing the various achievements and reactions on the several tests. Clinical observation, in contrast, never has isolated segments of behavior nor has it had quantifiable behavior at its disposal. For example, a notation of impairment of both judgment and attention based on direct observation or case history, is at best only a gross estimate, and does not allow for a decision as to which of the two functions is the more impaired. But only such relative assessment of impairment or retention of psychological functions can serve as an objectification of what Kraepelin already observed: that specific impairments are characteristic of specific mental disorders. Furthermore, fine inter-individual comparisons of impairments cannot be made from clinical observation: who would be ready to say which is the poorer of two poor judgments made in two different settings by two different people? Or who will be or is able to judge without tests like the association test or Rorschach test the

presence of a fundamental but early associative disorder, distinguishing the products of such an associative disorder from genuine originality of thought and wealth of idiosyncratic memories?

In today's clinical psychology a variety of new intelligence tests (particularly the Bellevue Scale) and concept formation tests (particularly those of Goldstein), as well as the Rorschach Test and its parallel series; the Thematic Apperception Test and the various quantifiable play and other projective procedures—all serve to elucidate assets and impairments in various psychological functions. And modern psychiatry's trend toward a loosening of nosological rigidity allows for more reliable comparison of varieties of mental disorders in regard to the characteristically impaired psychological functions in each. Furthermore, the ever-increasing interest of dynamic psychiatry in ego-psychology and defense mechanisms opens a way for psychiatry to understand assets of everyday-psychological-functioning and to compare these with assets seen in test achievements. Finally, the theoretical developments of psychology allow for exploring the specific nature of these functions, which, by their impairments or by their being outstanding assets of the individual, reflect the character or the disorder makeup, the defense mechanisms or their breakdown, used by the individual to cope with his conflicts.

It appears that the following interlocking sequence is fundamentally important for the test assessment of patients in adjustment and maladjustment: certain patterns of defense mechanisms are adopted and these determine specific strengths and weaknesses and in psychological functioning which then become characteristic of the adjustment of the personality; with the onset of maladjustment, an exaggeration or breakdown in these strengths and weaknesses characteristic for that maladjustment occurs which can be measured; this leads to a diagnostic differentiation.

For the psychological examiner the interlocking sequence should be, first, knowledge of the dynamic etiology of the mental disorder as productive of specific defenses or their breakdown; second, the theoretical knowledge of the psychological functions which are related to specific defenses or their

breakdown; and finally the knowledge of tests of the psychological functions.

The systematic and intelligent use of tests in psychiatry should yield extremely fruitful results. The employment of these test methods should not only lead to a greater proportion of correct and timely diagnoses, but in addition they can be utilized in an experimental way to investigate an important aspect of ego-psychology, namely, the nature of human thinking.

As a practical matter this is now working out as follows: Psychological testing has revealed the presence of a schizophrenic process in many patients, while clinical evidence of schizophrenic tendencies is faint or absent. To put it another way, the psychologist is discovering schizophrenia or "potential" schizophrenia or "latent" schizophrenia in patients who are not suspected of being classifiable as schizophrenic according to old concepts and which have puzzled the psychiatrist diagnostically and therapeutically. This is not happening in a few cases, but in a considerable number of cases, enough to make us suspect that the vast majority of persons in whom a "schizophrenic process" is present

are not easily recognizable as such without specific testing. It may be, indeed, that it is only the exceptional schizophrenic who comes to the psychiatric hospital for treatment, and it may be, again, that many persons whom we have called "alcoholic addicts," "psychopathic personalities," "intractable neuroses" and so on, must be viewed in a very different diagnostic (and therefore therapeutic) light. If so, our present nosological systems and many of our notions about "typical" clinical pictures are going to have to be radically revised. It may be that we shall have to look more sharply for certain traits of negativism, incongruity, impracticality and so on, and less searchingly for such gross manifestations of dereism as hallucinations and ideas of reference.

This is only one of the modifications in psychiatry which collaboration with modern psychological testing techniques is bringing about. The better the cooperation between psychologists and psychiatrists, the better founded will be the development of new nosological concepts, the more accurate and more timely our diagnoses, and the more specifically directed our treatment.

THE PSYCHOANALYTICAL APPROACH TO THE MASCULINE AND FEMININE PRINCIPLES IN MUSIC

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In considering music as a therapeutic agent, an interesting aspect worthy of further investigation is that of the masculine and feminine principles as evinced in both the personality of the composer and his compositions, and the possibility that they may have a direct relationship to like principles in ourselves.

The fact that all the great composers have been men, does not confuse the issue. Jung's theory shows man's feminine side (or Anima) to be usually suppressed, remaining for the most part in his unconscious. When the Anima is overstrong, and not projected onto a woman, a neurotic condition is caused and results in a homosexual personality. Much of the Anima is likely to be projected through the creative work of the individual, in which we then recognize a strongly neurotic feminine flavour, while in the better integrated man, his feminine side will show as merely part of a well-balanced whole, for the Anima then serves rather than dominates him.

Careful analysis seems to indicate the relative strength of the Anima to be the same in both the personality of the composer and his work; moreover many years of association with musicians, students and listeners have convinced the writer that we are apt to respond most favourably to music in which the strength of the Anima approximates that in ourselves. This seems to be true regardless of either the sex or the mental condition of the individual. Thus the schizophrenic patient, far removed from reality, will react according to his basic type; *e. g.*, a male patient in whom the masculine principle is weak, will prefer music strongly feminine in character.

In analysing compositions care must be taken lest we become confused by the style and period, which at first glance may cloak the individual expression, for although personality will cut through even the most es-

tablished forms, one must often look carefully to find it.

Before proceeding further, it is necessary to set down the premise from which we start, namely, a group of those masculine and neurotic feminine qualities which we may expect to find manifested in musical composition.

Masculine Qualities

Form
Impersonality
Direct Approach
Drive
Rhythmic power
Sustained thought and emotion
Superior thinking
Great output of large works

Neurotic Feminine Qualities

(As found in the man)

Mood
Personal approach
Indirection
Sentimentality
Rhythm subservient to melody and harmony
Quickly shifting emotions
Love of decoration, *per se*
Small output, with short works predominating

The following brief analysis of the lives of several of the great composers and the outstanding characteristics of their work, will show the underlying psychological pattern of the man and of his work to be similar.

THE FEMININE PRINCIPLE PREDOMINATING

CHOPIN

Life.—Born of good family in the peculiarly music-loving province of Mazovia, Poland, Chopin had a happy childhood, surrounded by brilliant and adoring people who, however, pampered him because he was frail and sickly. This led to an adult life of deeply dependent relationships with both men and women. He made strong projections, lasting all his life, on two men met in early youth,

with homosexual relations indicated but not proved. For some years he was also in love with a singer, who finally jilted him, but his strongest attachment was to a dominant masculine woman in the person of George Sand, who managed and mothered him for several years. She describes him as "living on infatuations and secret discontents which poison his dearest affections." She says further, that real grief never disturbed him as much as small vexations, the slightest offences being remembered for weeks, and that he was forever tormented by melancholy thoughts, though having occasional outbursts of extreme gaiety. His health was always fragile and he is described as feminine, irritable, sensitive and easily hurt, superstitious and moody. On hearing music he would frequently burst into tears. He showed an inordinate interest in his clothes and appearance, and in letters to friends, would give the most detailed account of everything said both to and about him. He remained forever tied to his family, and when away from home, was so entranced by a letter or present from any member, that no one might touch or even look at it for more than a moment.

All his life he moved in an aristocratic milieu. The luxurious salon life of Paris suited him, with its elegance and its adoring female society, whereas the slightest sign of poverty was extremely repugnant to him. Manners, he also felt, were so all-important that the least breach was never forgiven. There are frequent comments on his talent as an actor, but his playing was described as weak. He always wanted violets in his room. He was not outgoing to his fellow musicians, was anti-Jewish and had few men friends. He thought Beethoven's work too colossal, the storms of passion too violent and that he lacked delicate finish. Mozart was more to his liking.

Work.—Neurotic feminine traits can be found in the preponderance of short works in song form, preoccupation with delicate tracery and sentiment which only his genius saved from sentimentality. In general, everything in his music was subservient to the melody, which in turn served the quickly shifting moods and over-subjective and often morbid outlook. His rhythmic sense was

either nationalistic, or a highly nervous expression, rather than the manifestation of true virility. Almost his entire output was for solo piano.

Summary.—Mother-complex, shown by lifelong dependency on women or effeminate men, culminating in an attachment to a masculine woman. Feminine tendencies also shown in the enjoyment of soft luxurious life, love of clothes, moodiness, sentimentality, over-subjective attitude, lack of robustness in both physique and creative work.

TSCHAIKOWSKI

Life.—His was a childhood dominated by an almost hysterical passion for his mother, and further controlled by a succession of governesses. Although his entire family was unusually deficient in musical feeling, his father did not discourage his study of music, although not until Tschaiowski reached his twenty-third year, did he himself take his studies seriously. He had a hatred of friction, which caused him more and more to seek solitude. He was shy, timid and nervous and for a time suffered from hallucinations. At the age of 28 he fell in love and desired marriage but was not accepted. Throughout his life, he was extremely subservient to his teacher, Anton Rubinstein, but his strongest tie was the strange friendship carried on entirely by correspondence with Mme. von Meck, a wealthy patroness of the arts, whom he never met, but to whom he poured out his thoughts as to no other person. There is no indication that the very warm and genuine mutual interest of these two people was in any way affected by the generous financial support the composer received from his friend.

After thirteen years of this association, in an attempt to assert his masculinity Tschaiowski allowed himself to be persuaded by a young girl into a marriage which lasted but a few weeks and culminated in his severe mental breakdown. He dwelt on his grief to a morbid degree and allowed his correspondence with Mme. von Meck to end. His depression increased, he cried easily and moped himself into a state of anxiety. He was always profoundly disturbed by any criticism of his work, was absentminded and

a victim of bad dreams and insomnia. When his mother died, it was nearly three years before he could bring himself to tell even his closest friends. Both he and his brother were homosexuals, a fact which disturbed him greatly and to which he frequently alluded in letters to this brother.

Work.—The many works of large proportions show an almost continual turbulence and a lack of emotional balance that leans towards lush morbidity. The short periods of relief are more in the nature of neurotic sprightliness than healthy good humour. Rosa Newmarch says: ". . . His progress is based on impulse rather than upon intellectual convictions . . . the futility of human achievements . . . the attractive luxury of woe." Certainly self-pity and hopelessness show throughout all his great outpourings.

Summary.—Mother-complex, shown by an abnormal passion for his mother, later transferred to Mme. von Meck. His fear of responsibility shows in homosexual attachments and the emotional friendship with Mme. von Meck with its attendant financial support. His inability to make the necessary adjustment to his brief marriage and the mental breakdown which succeeded it, help to paint the picture of a highly neurotic and sexually immature personality.

LISZT

Life.—We read of his sickly boyhood, with much time spent on his knees in prayer and in tears, and of his great dependence on his mother. This developed into an adult life in which vanity and a love of flattery and approbation played a prominent part. In company he became an actor, bent on making a sensation, but too weak to withstand harmful influences. He was fêted by women in the salon life he loved, and indulged in whimpering self-pity, alienating his men friends. Of himself he says, "My true nature is for martyrdom . . . am I condemned forever to this trade of a buffoon, whose business it is to entertain a salon?" Others write: "You are too much preoccupied with being grand." "Liszt will never have the courage to take a resolution to break anything. The man in him oscillates widely, be-

tween the two poles of extremest passion; apparently he has not yet found that centre of gravity for his innermost being that is so difficult for the greatest man to find."

Liszt's gesture in becoming an abbe shows less religious conviction than one more craving for the dramatic spot-light. As an insight into his own character, nothing is more revealing than Liszt's short biography of Chopin, where in his descriptions of the famous Pole he gives himself away in every sentence.

Work.—His musical style is one of over-elaboration, bombast and "effects," being also over-emotional and streaked with pseudo-religious sentimentality. His interest is in colour rather than form, and he shows a marked weakness for making cheap and elaborate arrangements of other composers' works. In perspective, his contribution to music is seen to be chiefly that of adding to orchestral "effects." His compositions direct the attention to the performer rather than to the music itself, always reminding the listener of the pianist Liszt of the fabulous technique. His works have been described as "religious, idyllic, heroic, erotic" and full of "delirious romanticism."

Summary.—Mother-complex, shown in dependency first on his mother, then transferred first to many women throughout his life and finally to the Church, where the father confessor takes up the mother role. Narcissism shows by his concentration on the effect of his own personality on those around him and his love of all that was showy and ornamental for its own sake.

THE MASCULINE PRINCIPLE PREDOMINATING

BACH

Life.—Born into a family famous for several generations on account of the great number of distinguished musicians it produced, Bach spent a happy childhood where the study of music was taken for granted. When the boy lost his parents at the age of nine, he went to live with a brother, but became entirely independent when only fifteen. From then until the end of his life, he assumed responsibility for all needy members of the large family and although never

wealthy was so friendly and hospitable to all about him that his house was seldom without guests. He always enjoyed the company of his fellow musicians, from whom he received love and admiration, but spent little time with other people.

He made two happy marriages and was unremitting in his efforts to give the best possible education to his many children and also to his pupils. He chose persons of distinction as godparents for his children, with foresight as to their ability to help them in their subsequent careers. This sense of responsibility was carried into the teaching field also, for he kindly but firmly shed pupils he considered insufficiently talented, thus spreading a sense of the dignity and value of art to an ever growing circle. He was fond of saying, "The sole object of all music should be the glory of God and pleasant recreation." His was a deeply religious nature, balanced by a keen interest in the world about him, for throughout his life he was eager to know and understand everything new. He possessed a fine library and showed more interest in the literature of music than most of his contemporaries.

Of powerful build, Bach was endowed with an equally powerful personality—dependent, reliable, arbitrary, dignified, ready to fight for his own rights, yet full of human sympathy and consideration, never criticising his fellow artists and seemingly unaware of his own great gifts. He had a fine sense of humour and the comic style was as familiar to him as the more grave. It is noticeable that he found it necessary to play some work (often of inferior quality) by another composer, before he could free his own creative spirit and begin to write, and he wrote slowly with much rewriting. As a choir-master, he was a failure, as he lacked the tact and patience for elementary teaching and was too irritable to control boys. Yet his home life seems to have been unusually happy and satisfying. It is interesting to note that as a young man, Bach played the viola in ensembles, thus choosing a rich inner voice, binding together the whole, rather than the more prominent and acclaimed violin or cello. Bach went blind in the last year of his life and died of an apoplectic stroke, unnoticed and unsung.

Work.—Bach holds the unique position of summing up an entire period, for instead of blazing fresh trails he took the material of his time and carried it to heights that have never been approached before or since. The technique of handling such amazing intricacies of contrapuntal writing, while at the same time evolving ever larger and more complex forms, could only have been developed by a brilliant thinker; yet so great was Bach's genius, that in listening one is overwhelmed by the feeling that this must perhaps be the greatest example of inspired human creation. Here is not only a man of colossal mind, but one assured and well-adjusted to life, for in all his writing one finds a noble serenity, balanced and logical, tempered by warmth and a sense of humour and a love of humanity that reaches both up and down. In the sustained power of mood and phrase (phrases of tremendous span) there is an inevitability not to be denied, coming from an appreciation and acceptance of life in the fullest meaning of the term, not from the aggressive, compulsive drive of the neurotic.

Summary.—Independence, stability, power and vigour, self-assurance and a voluntary assuming of responsibility and protection towards those about him, a long and happy marriage, plus a lifetime spent in the glorification of form, add up to an outstandingly mature and masculine personality.

HANDEL

Life.—Handel's father, 63 years old when the boy was born, objected strongly to music and intended his son to practice law. Young Handel made no strenuous objections, but secretly took every opportunity to learn what he could of music on the side, so that upon the completion of his law training he was able to turn his full attention to the profession of both composing and performing. Here was a man of immense physical and mental stature, possessed by a tyrannical urge to create, rough and peremptory in manner, given to outbursts of violence and fury, always, however, tempered by wit and underlying good humour. His manners and tastes are said to have been gross, yet the general tone of his life was high, especially in

comparison with that of his age. He travelled extensively in Europe and spent some years in Italy, before finally moving to London, where he spent the rest of his life.

His life is characterised by vigour, action, wit, kindness, independence and readiness to do battle rather than compromise. Roland says:

He wrote his music with such an impetuosity of feeling and such a wealth of ideas that his hand was constantly lagging behind his thoughts and in order to keep pace with them at all, he had to note them down in an abbreviated manner. . . . Handel is a great painter of characters . . . all bear witness to the suppleness and the profundity of his psychological genius. . . . This genial improviser had the cult of style and instinct for immediate and vital effect. Our epoch has lost the feeling of this type of art and man, pure artists who speak to the people and for the people, not for themselves or their confrères . . . Handel's eloquence was not without relation to that of the epic orators . . . this eloquence did on occasion thrust itself into the soul of the nation, as in the days of the Jacobite invasion where Judas Maccabeus incarnated the public feeling. In the first performance of "Israel in Egypt" some of the auditors praised the heroic virtues of this music which could raise up the populace and lead armies to victory. . . . Certain melodies once written down continued to slumber in Handel's mind for many years, until they had penetrated his subconscious nature . . . they are so to speak, in search of a body where they can reincarnate themselves, seeking the true situation, the real sentiment of which they are but the latent expression and having once found it, they expand themselves with ease. It is even difficult to see a conscious and logical evolution in him. . . . He is of the kind who drink in the life universal, assimilating it to themselves. His genius adapts itself to a thousand images of passing events, to the nation, to the times in which he lived, even to the fashions of the day . . . such is the power of assimilation and the prevailing equilibrium of his nature that he never feels submerged and overweighted by the mass of these strange elements. Everything is duly absorbed and classified. This immense soul is like the sea itself, into which all the rivers of the world pour themselves without troubling its serenity.

When Handel wrote, it was always at breathless speed—often composing an entire oratorio in a week. His flood of ideas poured out in their final form, for he never turned back to rewrite any passage, and this early confident ease continued irrespective of the usually stormy and troublous state of his public life. During his early London years Handel wrote 46 operas, most of which were

produced, at first with great success. Later, however, partly because this success aroused the jealousy of his fellow musicians, but chiefly owing to political intrigue in the Court against the King, who was Handel's patron, another opera company was set up by the opposing faction, and for a long time Handel suffered all the sneers and humiliations that his rivals could think up, which caused him both bankruptcy and physical breakdown on more than one occasion. In spite of all this, the quality and serenity of his work never changed, although he finally turned away entirely from opera and began writing the many oratorios, which he felt would reach the hearts of the greater mass of the people. He seemed indeed to retire into himself, depending on his power of concentration to shut out the sounds of the storm whirling about him. One cannot speak of Handel's private life, for he seems to have had none. One or two mild love interests in his youth are mentioned, but he seems to have had no sex life. He was too busy for many social activities, and apparently had only one friend, a friend of his youth, who reappeared towards the end of his life and remained with him during his last years.

Handel's great concern for the poor was outstanding, and he was quietly generous to both individuals and charitable institutions. He greatly helped the Society of Musicians (for the indigent) and was responsible for establishing the recently opened Foundling Hospital on a firm financial footing. During his lifetime, performances of the "Messiah" might be given only for the benefit of the Foundling Hospital (to which he gave the original score) and three institutions for the poor, in Dublin. He went blind a few years before his death but continued writing until the end, leaving money and directions in his will for a statue of himself to be placed in Westminster Abbey.

Work.—Handel was a prolific writer of works almost entirely in large form. They were dramatic and forceful, the mental and emotional elements being well-balanced. So tremendous was the amount of creative material constantly crowding him, that "one can truly say he improvised every minute of his life." Roland in writing of the way in which Handel translates emotions into music

says: "We often speak of the psychological analysis of character in dramas and novels, but the term synthesis is more appropriately applied to Handel's dramatic art, for he adds one trait to another until he has built up the entire character . . . he represents every emotion in isolation, unmixed and pure, leaving it to the listener to form an impression of a character as a whole, making his men and women express their feelings and reveal the secrets of their souls characteristically, convincingly, naturally. A character in a Handel opera is expressed musically by the sum of the arias given to him. Each aria reveals a different characteristic." Beethoven thought Handel the greatest musician that ever lived.

Summary.—Independence, drive, sustained thought and energy, superior thinking, shown in the tremendous output of large works, the stress on form, the drive and strength that enabled him to produce in spite of devastating obstacles, point to a personality strongly masculine.

BEETHOVEN

Life.—Against a background of poverty and misery, with a drunken father and a sad, gentle, consumptive mother, the young Beethoven grew up a shy and taciturn boy, untidy, negligent and poor at his school studies. His father was a hard taskmaster, and the boy became obstinate, self-willed and scornful of all men, full of a colossal arrogance. His biographers one and all speak of him as the personification of energy and vigour, of his great physical strength, his extreme clumsiness and wild gesticulations, his loud shrill laughter and his humour which was merely an indulgence in horseplay and clumsy punning. He was inordinately proud of honours that came to him, but jealous and critical of others who received them. He was always a misanthrope, refusing to pay deference to others, but demanding great respect towards himself. His loudest criticisms always concerned morals, showing a merciless attitude toward any hint of sexual delinquency in others, yet his own philanderings were frequent and his business dealings dishonourable. . . . This sex complex caused him to cast aspersions on the character of any person who in any way opposed him.

As his deafness increased, he became insanely suspicious of his fellow man and his rudenesses and offences were continual and were followed by equally intense repentance, hardly consistent with complete sanity. In ordinary life, his contemporaries felt his mental structure to border on stupidity. He was always inclined to profound melancholy, and his whole rough awkward nature mellowed to a gentle sweetness in his latter years. Many of his troubles are symptomatic of the venereal disease from which he was reputed to suffer. All through the years his love of nature and the country is manifest, but outside of his art, his unhappy and neurotic guardianship of his nephew was perhaps the strongest feeling in his life.

Schauffler writes: "This was a man whom nothing could down; a man who could walk through the valley of the shadow of death and turn the croakings of the ravens into a rollicking canon . . . he had that infectious intensity, that almost superhuman vitality characteristic of the great . . . a colossus with one foot in classicism and one in romanticism;" and Rolland says: "Beethoven scarcely ever emerges from himself, but this self is a Universe, the masculine sculptor who dominates his matter and bends it to his hand . . . the spirit in command."

Work.—Ernest Newman has described his music as "Inspiration plus headwork, reflective reasoning, the latter, in his greatest music, on the same high level as inspiration . . . inspired technique." The widely varied writing, always in large forms, while free and spontaneous in effect, is nevertheless handled in such a way that structure is of the very essence of the emotional content. The assurance which enabled him to break with tradition, the rhythmic vitality, the rich harmonic treatment of the simple, almost banal themes, could have been achieved only by a powerful nature, dominant to the point of ruthlessness.

Summary.—A deeply introverted personality, unable to adjust to the outside world, showing evidence of a persecution complex, probably brought about by his deafness. His life, while undoubtedly neurotic, shows no sign of an over-stressed Anima, nor is there evidence of neurotic femininity in his music. Feminine passages in his scores, are the

warm, balanced demonstrations found in a man in whom the masculine principle predominates.

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DILANTIN TREATMENT FOR BEHAVIOR PROBLEM CHILDREN WITH ABNORMAL ELECTROENCEPHALOGRAMS¹

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More and more material has accumulated in recent years in the literature suggesting the existence of a disturbance of the cerebral electroactivity in the so-called behavior disorders in children and also in some of the behavior and personality disorders in adults. These findings support the assumption that organic or metabolic factors might be of etiological significance in the causation of some behavior disturbances. The term "behavior problem," as it is used in clinical diagnosis, comprises a multitude of symptoms which are not necessarily caused by one specific etiological factor and is, therefore, rather vague. Very little, indeed, is yet known of the mechanisms of cerebral functioning and, therefore, of the disturbances of cerebral functioning. Since the electroencephalogram represents one of the objective tools which medicine possesses today to investigate the abnormalities of central nervous system functioning, it was used in the study of the so-called behavior disorders, especially the behavior problems of children, because they are usually assumed to be somewhat less complicated than adult behavior problems.

Jasper, Solomon and Bradley(1) in 1938 reported the occurrence of abnormal cortical potentials in 70 percent of a group of behavior problem children which they studied and drew attention to the similarity to epilepsy in the abnormal pattern found, although clinically none of the cases were having convulsions at the time, and in most of them epilepsy was not suspected. The importance of these findings as a possible etiological factor was stressed. This was soon followed by reports from other investigators who confirmed the original findings and published additional studies(2-7). Solomon and co-workers(8) in 1944 concluded on the basis

of their study that, although a large percentage of abnormal EEGs is found in severe behavior disorders, these findings could not be considered in any way conclusive but could be regarded as an additional unfavorable factor, among others, influencing behavior adversely. Michaels and Secunda(9) in 1944 laid emphasis on their observation that the electroencephalographic findings correlate with certain neurotic traits of behavior disorders and not necessarily with the vague syndrome of behavior problem. Similar findings were again reported by Michaels (10) in the following year.

Silverman(11), Hill(12), and others reported abnormal electroencephalographic findings in constitutional psychopaths, and Strauss(13) directed attention to the frequent abnormal records found in chronic neurotic patients and suggested that some of them may be found suffering from some chemical or biological insufficiency as indicated by the abnormal EEG, and that, clinically, they might fall into certain categories.

Putnam and Merritt(14) described the symptom of "dullness" as an epileptic equivalent, and further understanding concerning allied epileptic disorders, latent epilepsy, and the heredity of epilepsy was gained through the well-known work of Lennox and Gibbs (15) and Lowenbach(16). Hill(17) reported frequent correlation of abnormal EEGs with aggressiveness in psychopathic personalities.

It is of further interest that Ross(18) found that the EEG in children may stay abnormal for a long time after encephalitis and encephalomyelitis, although at the same time no evidence of clinical pathology or of behavior disorders can be demonstrated.

Very recently, Gibbs and co-workers(19) reported that extensive studies reveal no significant differences in the electroencephalographic findings of criminals as compared with those of control subjects taken from the general population, and that no significant

¹ Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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correlation could be found between the EEG and the type of criminal behavior. In a preliminary study, they(20) had previously reported a greater incidence of abnormal EEGs in criminals.

In comparison with the relatively large number of investigations concerning abnormal brain potentials and abnormal behavior, it is somewhat surprising that comparatively little effort was made to utilize the findings for therapeutic procedures. Dilantin and other drugs have been used extensively in the treatment of epilepsy, but there are very few reports concerning their use in behavior disorders or other mental conditions. Cutts and Jasper(21) in 1939 reported on the effect of benzedrine and phenobarbital on behavior problem children with abnormal EEGs. In 1942, Lindsley and Henry(22) studied the effect of benzedrine, dilantin, and phenobarbital on 13 institutionalized children, and reported that they found benzedrine most effective, dilantin next, and phenobarbital least in controlling their behavior. These children were severe behavior problems, and no attempt was made to differentiate which type of behavior disorder might respond more to one than to another drug.² Bradley(23) reported more specifically the use of dilantin in the treatment of children with behavior disorders but failed to give detailed data concerning his method with this particular drug. Brown and Solomon(24) however, in the same year, reported that in a group of 20 cases of institutionalized behavior problems which they studied, 7 were given dilantin, 0.1 gram four times a day for a period of seven weeks, and 4 of the patients responded. No reference is made to the difference in electroencephalographic findings of those patients who responded and those who did not. It was only later that conditions other than clinical epilepsy were treated with dilantin on a somewhat larger scale. Putnam and Kalinovsky(25) medicated 60 psychotic patients with 0.3 to 0.6 grams of the drug daily over a period of two to five weeks and reported some improvement in about fifty percent of

the patients during the period of treatment. This was followed up later by Freyhan(26) and Kubanek and others(27) who found improvement in psychotic patients with marked motor excitement, restlessness, moodiness, and irritability during a period of treatment with 0.3 to 0.6 grams of dilantin. No EEG had been obtained in either group of psychotic patients. A recent paper by Brill and Walker(28) reports the successful use of dilantin in a 19 year old soldier with severe psychopathic behavior and an abnormal EEG who had shown no evidence of typical epilepsy at any time.

In the present study, dilantin was used in the treatment of children who fall clinically in the category of behavior problem children, both conduct and neurotic type, and in whom abnormal electroencephalographic findings were obtained.

MATERIAL AND PROCEDURE

The children studied in this group were selected on the following basis: The clinical diagnosis was behavior problem, the electroencephalographic findings showed abnormalities, and there was no known family history of epilepsy and no definite history of central nervous system disease in the children. They were between the ages of seven to twelve, of both sexes, colored or white, from various economic levels and of various intelligence. They were referred through welfare agencies, juvenile courts, pediatric out-patient clinics, through private physicians, or brought by their parents directly. All but one child were examined on an out-patient basis, and all of them were treated on an out-patient basis.

The routine procedure followed in these cases was complete physical examination, neurological examination, social history, psychiatric examination, psychometric testing, primarily on the Stanford-Binet test, Form L (with additional psychological procedures carried out on some of the patients) with electroencephalographic recording when the child had been without any medication for at least eight days. X-rays of the skull were obtained on all children with a history of head injuries. Routine laboratory tests as used in the usual pediatric work-up were

² In the experience of one of the authors, benzedrine has been found less effective in children who responded to dilantin.

done. Some of the children had additional tests which were requested by the parents but were always negative and are of no significance here. During each examination, the child was alone with the examiner.

The EEGs were obtained with the standard method now employed in most electroencephalographic laboratories. Six monopolar tracings or six dipolar tracings in different relative arrangements were recorded simultaneously. Details of the clinical findings usually remained unknown until after the electroencephalogram had been interpreted.³

Follow-up studies on patients were conducted in the majority of cases through return visits to the out-patient department. Occasionally this was done through correspondence and reports from the parents in the intervals between visits to the clinic. The dosage employed in the treatment was between 30 mgs. t.i.d. and 0.1 gram t.i.d. on the basis of size and age of the child, individual need, and clinical progress. No combination of drugs was used in this study. The cases reported here have been treated and followed over a period of nine to eighteen months. Increase of dosage of medication was advised primarily on the basis of clinical observations and symptomatology, as in the treatment of epilepsy.

CASE HISTORIES

CASE I.—E. L. P., age 10, white, female, was referred to the psychiatric out-patient clinic from the pediatric clinic of this hospital with the chief complaint of frequent crying spells, failure in school, and marked change in her total behavior of about a year and a half duration. It was learned that the child has been considered to be well-adjusted, happy, and bright in school until her present illness. When eight years old and in the third grade just before school ended, she became ill, developed abdominal pain and occipital headaches, seemed on edge, and became dissatisfied with school. She suffered from poor appetite and appeared dull. The next fall she got failing grades in school, began to cry unexpectedly without obvious reason, was frightened, refused to sleep by herself, and was also frequently observed talking aloud to herself. Her condition gradually increased in severity, and at the time she was brought to the clinic, it was difficult to make good contact with her. She seemed

only partially interested in her environment and afraid to talk.

She is the fourth of five children. Some of the siblings are described as having nervous trouble or temper tantrums. The family's economic condition is very inadequate. The father feels overworked and is frequently irritable. The mother keeps house and is often cross with the children because she has been sick and nervous for a long time. The patient has always gotten along fairly well with the family.

The patient's birth is said to have been normal and her development average until the onset of her present illness. At the age of three, she was knocked down by a car but was not unconscious and had no severe injury or other sequelæ. Some bed wetting beyond the age of three was successfully handled by getting the child up at night. There is also history of breath-holding spells when she was small, but no history of convulsions or any serious illnesses at any time.

The physical examination and routine laboratory studies revealed nothing beyond a somewhat poor nutritional state. The psychiatric examination showed the patient to be very passive, somewhat withdrawn, fearful, and even slightly negativistic. Contact was rather poor. Psychometric examination on the Stanford-Binet test, Form L, revealed an I. Q. of 81 under somewhat poor testing conditions because of the inadequate cooperation.

The EEG was reported as showing moderate, predominantly occipital dysrhythmia during the resting state; pronounced and almost paroxysmal dysrhythmia during overventilation and for some time afterwards.

Dilantin, 0.1 gm., b.i.d., was prescribed. Two months later, the child appeared improved, more alert and friendly. The mother reported that the patient was eating well, was not crying, was taking interest in helping in the housework, and again liked to play with other children. She was still somewhat afraid of sleeping by herself. Medication was increased to dilantin, 0.1 gm., t.i.d. She was not seen again until four months after the original interview because she had scarlet fever in the meantime. She appeared better nourished, smiling, cheerful. The family reported that no difficulties in her management had occurred, and the patient has since been followed for over a year, has been going to school quite regularly, is in good contact with her environment, appears friendly, although somewhat shy, and is getting along well.

CASE II.—S. J. M., age 9, white, female, was admitted on the pediatric service with the chief complaint of nervousness of three years' duration. She was referred for psychiatric consultation after initial pediatric studies revealed nothing of significance.

The patient is the second of three children and the only girl. The family has always been financially secure. Both parents are college graduates, the home situation is described as congenial, and the parents' attitude towards their children is very good. It is known that the patient makes every

³ For the permission to use his electroencephalographic reports for the description of the electroencephalographic technique, the authors are grateful to Dr. Hans Lowenbach.

attempt to utilize to her advantage her unique position as the only girl in the family.

Birth and development in infancy were normal except that it was thought she was somewhat slow in learning to talk. She had enuresis until the age of five and has always bitten her fingernails. She was started in a private progressive school system where she got along well. Then the family moved, and the child was transferred to a public school system in which she was put back a grade. She has never liked it there but had no special difficulties until the onset of the present illness when she began to show severe temper tantrums, was not able to sit still in school, was often reprimanded for not paying attention, could not get along with other children, and gradually began to fail in her school work. She cried easily and retired from company of her own age. Three to four months prior to this examination, she began sucking her thumb again. Her management at home became more difficult, and the problem she presented became increasingly puzzling. The family history is said to be negative for nervous or mental disorders.

The psychiatric examination revealed a rather attractive, well developed, well nourished, nine-year-old girl who appeared alert, established contact readily, and talked freely about her various problems. It was noted that she was quite restless and rarely sat still during the interview. Occasionally her attention appeared to drift; however, this was so mild that it might have escaped occasional observation. The psychometric examination on the Stanford-Binet test, Form L, revealed an I. Q. of 116.

The EEG was reported to be within normal limits during the initial resting state. Overventilation almost immediately produced a severe dysrhythmia with large, slow, and fast waves which persisted for a considerable time after the end of the procedure. Conclusion: Severe instability to overventilation (latent cerebral dysrhythmia).

A prescription for dilantin, 30 mgs., t.i.d., was given, and the patient has been followed since for a period of ten months. She has improved considerably, is getting along well with other children, and likes school. The mother states that she does not appear to be nervous at home, has stopped crying, and having temper tantrums.

CASE III.—B. C. F., age 7, white, male, was referred by a private physician with the complaint of behavior difficulties and inability to progress in school. He had been difficult to manage for a long time and was described as destructive, forgetful, impulsive and restless.

The patient has a twin brother who presents no problems. Family living conditions have always been adequate and compared favorably with the average farming family in this part of the country.

The birth was said to be normal, and the developmental history was non-contributory. The patient started school at the age of six and was considerably handicapped in his adjustment by his family's moving three times during the course of

the school year. The twin, in contrast, was able to adjust to these changes adequately. The teacher advised that the patient be taken out of school since she found that he was difficult to manage and probably mentally retarded.

The physical examination was essentially negative. The psychiatric examination revealed a cheerful, fairly well developed, cooperative and friendly, seven-year-old, white, male child who made good contact, talked freely, was anxious to play, and showed self-confidence. His speech was somewhat slurred and difficult to understand at times. There was a marked tendency to hyperactivity and restlessness. The Stanford-Binet, Form M, intelligence test revealed an I. Q. of 73.

The EEG showed slightly abnormal waves over the left parietal region of questionable significance. Overventilation had no effect on the pattern.

The patient was placed on dilantin, 30 mgs., three times a day. The patient has since been seen on several occasions over a period of eight months. He appeared less hyperactive, and was generally easier to manage. The mother reported that except for a period of about a week when she was unable to have the prescription refilled, she has had no special difficulties with him and has considered his behavior normal.

CASE IV.—W. J. K., age 8, colored, male, was referred by the Juvenile Court. The patient's problem was reported as truancy from home and school, stealing, lying, and "meanness" for the past two years.

The patient is the oldest of six children in a day laborer's family with rather low hygienic and dietary standards. The patient's birth was normal and followed a full-term pregnancy. At the age of ten months, the patient had a series of boils on his head accompanied by a high fever. He never learned to talk plainly although he was said to have begun speaking at the average age. He has never completely given up thumbsucking and resorts to this when confused or worried. Truancy and staying out late at night began shortly after he started to school at the age of six. He was teased a great deal by other children for his speech impediment, and was often punished for fighting back at the other boys. Because he could not deal with the patient's behavior, the father finally took him to the Juvenile Court, but this did not frighten the boy as the father had hoped, and no improvement was noted.

Physical examination was negative except for poor oral hygiene and a very questionable, inactive rheumatic heart. Skull X-rays were negative. The psychiatric examination gave the impression that the patient's difficulty was partly on an environmental basis and partly of neurotic character. On the Stanford-Binet, Form L, intelligence test, the patient scored an I. Q. of 71.

The EEG revealed "generalized cerebral dysrhythmia much aggravated by a short period of overventilation."

Dilantin, 0.1 gm., twice a day, was prescribed. Follow-up after one month of medication revealed

that the patient was getting along very well, both in the home and community, according to the mother and social agency. Since, he has not been medicated regularly because the family cannot be relied upon to provide him with the medication, and arrangements are being worked out through the Juvenile Court to make the father responsible for providing the child with medication. During periods without medication, he reverts to his previous behavior.

CASE V.—R. S. S., age 12, white, male, was referred by the Juvenile Court because of truancy from home and school, wandering about the streets, and lying.

The patient is the fifth of nine children and was said by his father to be the only problem child in the family. The family has always had lower-middle-class financial standards, and their social adjustment in the community has been satisfactory.

The patient's birth was normal, and the early history was negative except for a rapid succession of measles, whooping cough, and pneumonia at the age of three. At the age of seven, he suffered a compound fracture of his arm which was improperly set and required later operative correction. He started school at the age of six. He failed three times partly because of absence but mostly due to inability to do the work. He dislikes school, and his left arm is weak and slightly deformed so that he is unable to play in sports with the other children. He feels handicapped in fighting back at the other boys.

During the psychiatric examination, the boy stated that there seemed to be a voice telling him when to run away from home. On the Stanford-Binet test, Form L, the patient scored an I. Q. of 56.

The EEG was reported as follows: "The cerebral electroactivity is irregular but not definitely abnormal during the resting state. Overventilation produces large, slow waves which disappear shortly after the end of overventilation."

Dilantin, 30 mgs., three times a day, was prescribed. Follow-up studies reveal that the patient has been taking dilantin regularly, and the mother feels very definitely that it has helped him. He has not wandered away from home since he has taken the medicine and has been much easier to manage. However, he continues to have difficulties in school and family relationships.

CASE VI.—J. D. F., age 12, white, male, was referred by a private physician because of failure to progress in school, behavior difficulties, and occasional stuttering. It was learned that he had no difficulties at home until he entered school. He failed the first grade and has always disliked school. In the sixth grade, at the time of this referral, he was again having difficulty with his work, was discouraged, and was very difficult to manage. Suspension from school and various types of punishment employed by his family were of no avail in remedying the boy's behavior.

The patient is the fourth of five children and had

a normal birth. He showed a tendency to left-handedness, and the maternal grandmother is left-handed. A brother of the mother stutters.

The psychiatric examination showed a cooperative, friendly, quiet, and alert twelve year old boy who became uneasy when talking about his difficulties in school. On the Stanford-Binet, Form L, intelligence test, the patient scored an I. Q. of 89.

The electroencephalographic report was as follows: "During the resting state, there is present a moderate but definite dysrhythmia which is most pronounced over the occipital regions and which is slightly more marked over the right than over the left side. Overventilation produces paroxysmal exacerbations. Conclusion: Dysrhythmia and unstable cerebral electroactivity."

Dilantin, 30 mgs., t.i.d., was prescribed. The patient has been seen several times since, at six weeks' intervals, and it was learned from his family that he has presented no disciplinary problem, has gotten along better with other children and his family, especially with his father, has seemed more at ease, has shown interest in reading, and has been on the whole better composed. There has been no need to punish him at any time.

CASE VII.—M. E. D., age 11, white, female, was referred to the psychiatric out-patient clinic by a family service agency. The complaint was nervousness, unpredictable crying, enuresis, occasional mild vomiting after meals, and loss of interest in school.

The patient is the third of three children in a family of low economic and cultural standards. All the members of the family have shown a poor degree of adjustment and have long records with many social agencies. The oldest child is feeble-minded, the second child is in a training school as a result of his juvenile delinquency. The family inter-relationships are strained at times, and the father is known to beat the mother.

The patient's birth and development were said to be normal except for the persistence of enuresis, temper tantrums, and fingernail biting. She has always been considered "nervous"; however, she was not regarded as difficult to manage or as a behavior problem. The parents felt that some of her crying spells might be due to the fact that children have teased her about her brother being in a "penitentiary," but that her total behavior could not be accounted for on that basis.

Physical examination and routine laboratory studies were essentially negative. Psychiatric examination revealed a fearful youngster who cried and was aggressive and evasive, expressing anxiety that she too may be sent to a reform school. On the Stanford-Binet test, Form M, the patient scored an I. Q. of 71.

The EEG was reported as follows: "During the initial resting state, the record over the occipital region showed many waves of increased amplitude, abnormal form, and unstable frequency. Overventilation leads to a further increase of the abnormality both in number and extent, but after the end of the procedure, the pattern is within normal limits."

A prescription for dilantin, 30 mgs., t.i.d., was

given. Three months following the first examination, the mother reported that the child's behavior was much improved, and she was getting along better in school. A letter from the social agency, four months following examination, stated: "The child's teacher says she has noted marked improvement in her since she attended your clinic. Previously, the girl had always been 'into something,' and the teacher had to have Margaret sit right near her so the girl could be kept under close supervision. Also, the girl's attention could be held for only a short span of time. The girl is no longer a problem of this kind to any great extent." The patient has now been followed over a period of nine months, and she is progressing very satisfactorily.

CASE VIII.—J. C., age 9, colored, male, was referred for pediatric and psychiatric examinations by the Juvenile Court because of truancy from home and school, lying, stealing, unpredictable behavior and difficulty in management.

The patient is the oldest of three children and the only boy. The father is a farm worker who has been employed in the shipyards during the war. Neither father nor mother can read or write. The mother has received treatment for syphilis over a long period of time, but the patient's blood tests have always been negative. The family has received help from many social agencies in the locality.

Birth and developmental history as obtained from the family were negative. The patient started school at the age of six and has been promoted to the third grade, although he has always done poor work. The onset of the present difficulty appears to have been a gradual one and started with truancy from school. Later he frequently stayed away from home over long periods and lied concerning his whereabouts. Apparently, he has had all kinds of adventures, and since little information concerning them could be obtained from him, most was learned from outside sources.

The physical examination was negative. Routine laboratory examinations, X-ray of the skull, and serology were negative. The psychiatric examination revealed a well developed, somewhat dull, nine year old colored boy who appeared shy and evasive, but friendly, and related some of his difficulties freely while keeping steadfastly silent concerning others. On the psychometric examination, he scored an I. Q. of 65.

No history could be obtained of severe illness or convulsions at any time, but because the child claimed not to remember some episodes which were related about him, electroencephalographic study was requested. The record showed a moderate but definite generalized cerebral dysrhythmia which was further aggravated by overventilation.

A prescription for dilantin, 0.1 gram, twice a day was given. An attempt was made to influence the home environment through the help of the local social agencies.

Follow-up report, three months after the beginning of his medication, stated that there was improvement in his "nervous condition" and that he was somewhat easier to manage. It was also learned

that there had been no improvement in the home situation and that the supervision of the boy was still very poor.

Subsequent follow-up studies since have not been possible for reasons which are beyond our control.

CASE IX.—C. F. W., age 10, white, male, was referred by the local Welfare Department. The complaint was "juvenile delinquency and truancy." The mother told how the boy would bring home little things from school which were definitely not his, and which he said he had found. It was discovered, however, that these things had been taken from other children or from the counter in the ten-cent stores. The teacher had also complained that the boy was not attentive, conducted himself poorly, and that he was occasionally caught smoking in school.

The patient is the third of four children and the older one of two boys in a family of middle-class cultural standards but limited means. Patient's birth and development were said to be normal. He had the usual childhood diseases without sequelæ. However, he has had many accidents and injuries throughout his life which necessitated medical or surgical care but resulted in no permanent disabilities. He started school at the age of six and repeated the first and second grades. He never liked school very well, and the onset of his behavior difficulties is dated by the mother to the time he started to school.

Physical examination was negative. Psychometric testing showed an I. Q. of 80. An electroencephalogram was requested in view of the frequent accidents to rule out any organic basis for the boy's behavior.

The EEG was reported as follows: "During the resting state the pattern is irregular but for a boy this age it may still be in the range of normal. Overventilation produces a moderate but definite generalized dysrhythmia which, toward the end of the procedure, assumes almost paroxysmal character."

On the basis of this report, dilantin, 30 mg., t.i.d., was prescribed. It was also recommended that the patient and his mother be accepted for psychotherapy, and this was initiated by the social worker and a play therapist.

The mother stated that the boy showed considerable improvement on this combined régime. After approximately three months, the mother reported some intensification of the boy's problem at a time of upheaval in the family, and the dosage of dilantin was increased to 60 mg., t.i.d. Again the mother reported improvement. The boy is said to obey better and get along better with other children. No difficulty with stealing or truancy has been reported since the increase in dosage of medication. Over a six months' period now, it would be difficult to state whether this boy might not have improved without medication, on the basis of psychotherapy alone, or vice versa. However, it is believed that the medication at least paved the way to successful psychotherapy.

CASE X.—E. D. M., age 7, white, female, was first seen in the psychiatric out-patient clinic in July, 1944. The chief complaints were sleeplessness, temper tantrums, refusal to go to school, and disobedience. She had, during a temper outburst, made an attempt to shoot another child with a gun.

The child is the third of five children. Her delivery was normal, she appeared to develop normally, and presented no difficulties until the age of about three when a younger brother was born. She began to disobey, insisted on having her own way, refused to go to bed, lying awake for hours, and at times had spells where she would plunder the drawers in the house and tear up everything. The mother was working and could not give the child much time or attention. The father was described as easy-going, giving in rather than disciplining the child. Shortly after starting school, she began to have choking spells and screaming attacks, was inattentive in school, and made it clear that she did not care to go. Her school work was very unsatisfactory and her relationship to the teacher quite disagreeable. She was taken out of the public school and sent to a parochial school where she liked it for five days, but then the same difficulty started. It was observed that at times she produced large amounts of saliva after the temper tantrums, and at times at night. However, at no time was she unconscious, drowsy, nor did she have convulsions. About four weeks prior to examination, the patient's five year old sister was teased by one of the neighborhood boys, and the patient went to her father's roll-top desk, got a pistol, and fired it at the boy. Fortunately, the bullet missed and only frightened the children. The child was put to bed and soon fell asleep; awaking she told the whole story without memory defects.

The father is a 56-year-old railroad repair man; the mother is a 38-year-old housewife. The income is moderate, and the home on the whole is quite desirable. A maternal aunt was at a state hospital, and the maternal grandmother is said to have lost her mind at the age of 50.

Physical examination revealed nothing of significance. The mental status showed a well developed, well nourished, female child who was neatly dressed and well behaved, seemed in good contact with her surroundings, and exhibited good memory. The psychometric examination on the Stanford-Binet test, Form L, revealed an I. Q. of 94.

The electroencephalographic examination was reported as follows: "The recordings show only minor irregularities during the resting state but a marked instability to overventilation which lasts for a considerable time after the end of the procedure. The findings are of the type often seen in children with behavior disorders and temper tantrums."

The child was put on dilantin, 0.1 gram, b.i.d. At first, monthly check-ups were made which later extended to check-ups once in three months. Ever since the first visit and medication, the child has been getting along very well, doing good work in school and playing peacefully with other children,

has presented no unusual difficulties in management, and has shown no excessive irritability or conduct disturbance. She was last seen eighteen months after the first examination and is at present kept on dilantin, 0.1 gram, once a day, with very satisfactory results.

DISCUSSION

Since the original report by Jasper, Solomon, and Bradley concerning abnormal electroencephalographic findings in child behavior disorders, considerable work has been done in the field. The relationship of the behavior disorders to epileptic states, the so-called epileptic, or epileptoid personality, of patients afflicted with behavior disorders has been elaborated on, and more recent findings also indicate the possibility of some relationship between cerebral dysrhythmias and neurotic disorders in some cases.

For theoretical purposes, it may be assumed that some behavior disorders of the conduct type, as well as some behavior disorders of the neurotic type may have a common basic principle which lies primarily in a disturbance of function of the central nervous system and is not primarily of simple psychogenic or environmental etiology. The response to dilantin, of some patients with psychotic states, as outlined by Putnam and Kalinovsky and later by Freyhan and the case described by Brill and Walker which belonged in the group of constitutionally psychopathic personalities, are of further significance in this line of thought. It is not known at this time what might be the underlying mechanisms causing the disturbance in the cerebral activity, and secondarily probably in the behavior.

An attempt has been made by Strauss, Rahm, and Barrera to segregate the group of behavior disorders with positive electroencephalographic findings as so-called epileptoids and to subdivide the group into so-called (1) symptomatic epilepsy in which the epileptoid behavior originates from an organic pathology of the brain indicated by focal cerebral dysrhythmia, (2) "idiopathic epileptoid with a possible relationship to epilepsy as indicated by the presence of cerebral dysrhythmia," and (3) pseudo-epileptoid in which there is a group resemblance in the behavior to that of epileptics but in which no

abnormal electroencephalogram was found. In the group studied here, the symptoms do not appear necessarily to indicate a definite relationship to the symptoms commonly presented by epileptic personalities. It appears, rather, that we are dealing with a mixture of features in which we find neurotic difficulties, retardation in development, impulsive behavior, dullness, and regression as well as retirement from the environment and aggressiveness. It is of interest that there was no known history of epilepsy in the family in any of the cases. Lennox has pointed out that only in one out of five cases of epilepsy is a family history of convulsions obtained and, of course, it has been shown that a large number of relatives of epileptics show positive electroencephalographic evidence of cerebral dysrhythmia without direct clinical evidence of such.

Behavior disorders, as a diagnostic entity, include such a variability of symptomatology with a possibility of manifold etiology that at the present state of investigations any light which can be shed upon the subject with the help of one particular method, namely the electroencephalogram, must be welcomed. Yet the findings obtained must be explored slowly and regarded with reservation. The authors would be inclined to hesitate to accept a subdivision or classification of behavior disorders at this time purely on the basis of electroencephalographic studies. A negative electroencephalographic report is not necessarily of positive significance. One might, for example, wonder whether some so-called behavior disorders whose electroencephalographic recordings reveal no abnormalities under standard conditions, might not produce abnormal recordings under special conditions, such as after increased strenuous activity, or hydration with pitressin test, or similar devices. It is further possible that more evidence of cerebral dysrhythmia could be found if our methods of electrical examination were in a more advanced state. Too little is known generally about metabolic conditions of the central nervous system and the influence of metabolic factors on behavior and on electroencephalographic recordings.

For the present, however, although it is definitely premature to make any statements

concerning the basic nature of any of the behavior disorders, it appears encouraging that at least some objective evidence of cerebral dysfunctioning can be obtained and translated into therapeutic terms.

In this frame of thought, a heterogeneous group of patients with heterogeneous symptoms is being presented here. The fact that all of the patients showed abnormal electroencephalographic findings, primarily signifying cerebral dysrhythmia, while clinically not suspected of epilepsy, and the fact that they responded to dilantin therapy are considered points of significance in the presentation. The children were from various stations of life, of different intelligence, and from a physical standpoint healthy. The attitude of their various environments towards their difficulties was one of rejection rather than sympathy. In other words, the attitude was one expressed against a social handicap rather than against a disease. Nevertheless, it was shown that the children responded to therapy regardless of environmental factors or psychological situations and that the disorder, namely their "bad behavior" could apparently be controlled or ameliorated through an approach directed at the cortical cerebral activity.

The significance of the above study, in relation to recognition of the disorder and treatment of these difficulties, as well as prevention of further difficulties, is extensive and demands further study in the field. The importance such early recognition and treatment can have, in the prevention of long-term development of personality disorders and conduct disturbances, in the prevention of institutionalization and the advantage of leaving the children in their home environment, adequately warrants intensive further investigation.

SUMMARY

A group of behavior problem children with abnormal electroencephalographic findings were treated with dilantin.

None of the children presented clinical evidence of epilepsy or were known relatives of epileptics. The physical and neurological examination of all the children was negative. None of the patients were adequately con-

trolled by their environment previous to treatment. All were treated on an out-patient basis and showed definite clinical improvement under dilantin treatment.

The results are considered encouraging and warrant further follow-up and study.

The implications and significance of recognition and treatment of these cases in terms of prevention or amelioration of adult neuropsychiatric difficulties are discussed.

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RACIAL ASPECTS OF EMOTIONAL PROBLEMS OF NEGRO SOLDIERS¹

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For those who have recognized on many occasions the failure to understand Negro Americans on the part of their white fellow citizens, it was not a surprise to learn that many military psychiatrists felt insecure when dealing with the emotional problems of Negro soldiers. This insecurity is easy to comprehend if one realizes that the military psychiatrist, to be practical and effective, must work on the level of the common soldier and speak his language. To do so was especially difficult for white medical officers when dealing with the Negro soldier, because most of them have been subjected throughout their life to many false concepts of the Negro.

The purpose of this paper is to aid the psychiatrist and others dealing with the emotional and other health problems of Negroes to get a better understanding of the Negro patient. It explains reactions of Negro soldiers to racial segregation and discrimination, and is based upon observations made within the Zone of the Interior during the war. Developed in the United States with peculiar intensity, these racial factors are partially responsible for the incidence of psychiatric disorders of Negro soldiers. Since in civil life, racial discrimination prevails fully as much as in military service, a better understanding of its effects will prove of value to anyone who may deal with the health or emotional problems of the Negro. Unquestionably, in post-war America large numbers of Negroes need psychiatric care and will go in search of it to civil and industrial hospitals and clinics as well as to the hospitals of the Veterans Administration.

The observations on which this paper is based represent five years of military service in varied capacities with Negro troops, including assignments as platoon leader and company commander in an infantry regiment, battalion surgeon (infantry), commander of a company of medical students in the Army Specialized Training Program and Consulta-

tion Service psychiatrist in Army Service Forces Training Centers with relatively large Negro populations. These assignments permitted close contact with large numbers of Negro soldiers of varied educational and environmental backgrounds, ranging from the marginal inductees commonly found in ASF training centers to the college graduates of the medical ASTP unit. An advantage possessed by the writer in dealing with Negro soldiers was the absence of the barrier of racial difference. He did not have to overcome those defenses which the white psychiatrist was compelled to evaluate more or less blindly in arriving at his conclusions.

It should be unnecessary to call attention to the fact that Negroes are not all alike. Negroes differ from one another as much as any citizen of our country might differ from any other citizen. It is difficult to conceive of a statement beginning with "All Negroes are . . ." which would be true. However, although there are Negro millionaires, the majority are in the lower economic classes; there are many Negro Ph.D.'s, but the majority are poorly educated; there are many Negro scientists and master craftsmen, but the majority are unskilled. It is an accepted scientific fact that these conditions are not the result of any biological racial inferiority. It is understood that the Negro needs only equality of opportunity to make progress equal to that of other races in America.

A characteristic of Negroes, and one that few of our white citizens have had an opportunity to observe, is that the vast majority are intensely interested in and conscious of their race, and resentful of the imperfections of our democracy. This characteristic, so eloquently presented by Negro literature, is still hidden from great numbers of the white race, probably, at least in part, because for many generations the Negro in the South has found that it is much easier to get along with the white man if he tells him only those things which he believes the white man wishes to hear.

There is much evidence to support the

¹Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

concept that good motivation and morale bear an inverse relationship to the incidence of wartime psychiatric disorders. As a result of this evidence the War Department expended great effort towards improving the motivation and morale of our soldiers. Experience as a psychiatrist in a consultation service fostered the belief that poor motivation and morale caused a high percentage of referrals, and that poor motivation in the Negro not unusually originated from racial factors, which were superimposed on the usual personal factors. While segregation and discrimination may be considered direct racial factors, some of the normal personal factors affecting motivation in the Negro are so influenced by race that they may be considered indirect racial factors. For example, the poor economic status, poor medical care and lack of education of many Negroes prior to induction, which were undoubtedly influenced by race, resulted in poorer health with an accompanying increase in chronic ailments, lack of ambition or goal, and diminished industry, all of which added to the difficulties Negroes experienced in adjusting to the military régime.

There is general agreement that the motivation of American soldiers to fight was less than that of the troops of most other large nations involved in the war. The American apparently fought mainly because he had to. Several factors, however, worked toward increasing the motivation of the Negro inductee. First, the fact that most Negroes, as a result of their lack of acceptance in our society, gain, at an early age, a deeper understanding of democratic ideals as expressed in our Constitution and Bill of Rights than many Americans; consequently they were able to comprehend what was at stake in the war against fascism. The Negroes' belief in democracy is positive because it is a goal toward which he is striving, rather than an accepted heritage of the past. Other factors affecting the motivation of the Negro include: the feeling of many that military service offered the chance to satisfy the long frustrated desire to be thought of as full-fledged Americans; the hope and expectation of many that the war would result in an improvement of conditions affecting their race in this country; the fact that in many

cases army pay and allotments were greater than the meagre incomes from civilian jobs; and a feeling that military service offered easy flight from a mode of living with which they were dissatisfied. The observation of these feelings in Negroes entering the army has led to a belief that their motivation was generally stronger than that of the white inductee.

Now let us consider the experiences of those relatively well motivated inductees in military service. They had entered the army in large numbers from the great industrial centers of the North and the farms and cities of the South and West. A proportionately large number were of marginal literacy but the majority were fully capable of becoming good soldiers, and many had skills and abilities much needed by our armed forces. Certainly there was no stereotyped Negro soldier.

The first important racial factor encountered by the Negro inductee was segregation. He found himself separated from all other inductees and placed in a Negro American unit rather than just an American unit. Segregation, however, did not immediately deteriorate motivation as some might have expected. In fact, the majority of Negro inductees apparently accepted segregation docilely, and their attitude may be explained by their strong motivation to serve combined with varying degrees of adjustment to this form of frustration gained from previous experience. The type and degree of adjustment was naturally dependent on the amount and frequency of frustration engendered by this factor in the Negroes' civilian environment.

The reaction of Negro inductees to racial segregation may be clarified by dividing them into three general groups dependent on previous experience, and discussing the reaction of each group: First, just as the doctrines of racial superiority of the Germans and Japanese proved convincing to many of their nationals, the doctrine of Negro racial inferiority and "White Supremacy" has proved convincing to some Negro as well as white Americans. The Negro inductees in this group, who undoubtedly constituted a minority, could have been expected to approve segregation. They probably would

have suffered emotionally if the army had operated on a truly democratic basis. Experience during the war has indicated that this group was much smaller than has been generally assumed, especially by the southern white man, and that the main reason for this difference was the habit, noted above, of many southern Negroes of telling the white man only those things he believes his Caucasian fellow citizen wishes to hear. The second group, comprising the majority of Negro inductees, was not so well protected against reaction to this factor. Although they were bitter and resentful, however, their motivation was not immediately dissipated, due to the fact that in civilian life they had achieved a more or less satisfactory adjustment to racial frustrations, and fore-knowledge of segregation in the army helped them to avoid severe emotional trauma from this cause. The third group was formed by those who had lived in an environment where democracy is practiced appreciably. Probably a few of them had never been confronted with the doctrine of racial inferiority. Others prior to induction had avoided situations threatening the Negro with emotional trauma from race discrimination. In general, the reaction of members of this group against segregation in the army was most severe when they first learned about it. By the time they were inducted, most of them had accepted the hopelessness of a struggle against an army custom in time of war, and began their service with bitterness and resentment directed towards an army that did not practice the principles for which it was ostensibly fighting. A few utilized the courts in an effort to avoid induction into a segregated army. Numerous others were rejected by the psychiatrists at induction examinations after they verbalized their feelings.

Although the effect of segregation on the Negro inductee was not dramatic and immediate, it was continuous. It produced an emotional cancer, whose growth depended to a great extent on the other important racial factor, discrimination.

In order to evaluate reaction to race discrimination, one must first appreciate the effect of military service (in segregated units) on the psyche of the Negro soldier, remembering that the military environment

constantly changed the individual so that previously learned adaptations could no longer give satisfactory protection against the old frustration. This influence is more easily understood when one examines some of the practices of discrimination and their effect on the life of the Negro soldier. A short time after beginning his training he usually found that there was little for him to do during his off-duty hours because of inadequate facilities for recreation and entertainment. He compared these unfavorably with the facilities available for white troops. He learned that there were athletic teams and other activities at his installation from which he was barred or discouraged. He read the post newspaper and found that although there were thousands of Negro soldiers on the post, there was very little in the paper that directly concerned them. He frequently found himself assigned to a quartermaster or service engineer unit. It was difficult to make any troops in those services understand the full importance of their effort. The Negro soldier in those branches, furthermore, was usually not in close contact with the white soldiers in the same type of units and therefore felt that the dirty work had been given to him. Another depressing factor was the lack of Negro officers and headquarters personnel in many organizations. Negro officers are not necessary to lead Negro troops (good leadership is needed for all troops, and is certainly not dependent on race), but the absence of Negro officers and headquarters personnel caused a feeling of inequality of opportunity which was easily dramatized.

Because the Negro soldier was most often garrisoned in southern states, whenever he left the camp he was confronted with all the racial bigotry of nearby communities. Whereas, before induction he may have been adapted in some degree to segregation and discrimination, he expected now that his uniform—which indicated that he had been called to spill his blood, if necessary, in defense of his native land—would mitigate their evils. Instead he frequently found these evils to be aggravated because of the fear of many in the community that he might forget his allotted place of inferiority. These community attitudes were frequently strength-

ened by the official acts of commanding officers, who sometimes placed entire towns and large portions of cities off limits to Negro troops. Commanding officers, too, frequently failed to protect the wearer of the uniform, when he was a Negro, against unwarranted brutality by civilian policemen and other public servants. Although the daily community papers read by the soldiers rarely gave much space to instances of brutality, the Negro papers always gave space to even the smallest racial incident on a national basis. Although not usually available at the post exchanges, the Negro papers were always obtained and avidly read by Negro soldiers. Inadequate recreational facilities granted the most verbal ones plenty of time to discuss with others incidents and policies that indicated he was a Negro American soldier rather than just an American soldier.

Negro soldiers, finally, were frequently commanded by white officers whose attitudes toward race were to some degree fascist. Even where the racial attitudes of white officers, if understood, would have been acceptable to the soldiers, they frequently alienated their troops by failure to understand that the Negroes, like other minority groups, are hypersensitive about some things which appear to be of little importance to the majority. Examples are calling soldiers by their first names or nicknames, the use of words or statements which indicate that the officer considers himself fundamentally different from his troops, and the use of certain words which have become distasteful to Negroes, such as "boy." No attempt is made in this paper to list all the factors which were demoralizing to Negro soldiers as such. But, if one considers those which have been cited, together with the fact that constant discussions of racial incidents and policies resulted in a crystallization of resentment and an increase in frustration, the damage to motivation and morale and the consequent increase in the incidence of psychiatric disorders among these soldiers can be appreciated.

The War Department did take action to correct inequalities in recreational facilities by means of a letter (July 1944) which indicated that army recreational facilities were

for the use of all troops and there should be no discrimination on a racial basis. Although this action proved ineffective at most installations, it had an important salutary effect on the mass of Negro soldiers because it added a ray of hope to an apparently hopeless situation. This is especially important from a psychiatric viewpoint since only frustrations without hope of solution are entirely destructive.

As a direct or indirect result of racial practices common in most parts of our country, many Negroes had learned to distrust white people long before entry into military service. Because of the nature of military service, the gratification of many desires of the Negro soldier was dependent on or even at the mercy of his immediate commanding officer. Whether he was the recipient of good will, neglect or malice depended to a great extent on the attitude of this officer. When his complaints were misunderstood or unheeded for a long time, it was only natural that a marked sense of insecurity would develop with accompanying anxiety and without the opportunity for relief afforded by contact with someone he trusted. When this state of chronic emotional tension became sufficiently severe, one of several varieties of behavior would emerge. In some cases a more or less typical anxiety syndrome resulted; others developed somatic complaints or were plagued by an exacerbation of pre-existing problems; still others developed antagonistic and rebellious attitudes often accompanied by military delinquency.

Those who openly expressed antagonistic or rebellious attitudes were likely to find themselves in the guardhouse. Needless to say, this disciplinary measure was rarely helpful. Other types of reaction, when noted, invariably sent the soldiers to sick call and their dispensary physician. Unfortunately, these physicians, as a consequence of the organic and physiologic tradition in medicine, often failed to recognize or consider the emotional components of the soldiers' complaints. When, as was most often the case, examination did not reveal organic disease, they were treated symptomatically, and this practice resulted in frequent return visits often complicated by an exaggeration

of complaints in an effort to get attention and relief. The harassed physician then usually referred them to numerous consultants where organic clearances were obtained and then charged or implied that these men were malingering. Meanwhile, the emotional tensions of the soldiers were increased by a belief that they were being denied good medical care for symptoms, and as a result the symptoms tended to become fixed. After varying lengths of time they were referred to the psychiatric consultant by their commanding officer, dispensary physicians, surgical or medical consultant, or chaplain.

Before considering the meeting of these soldiers with the psychiatrist, let us reconnoiter the ground on which they meet. Soldiers in general understand very little about the psychiatrist. However, they have heard that he is an officer who gives Blue (without honor) Discharges to men he thinks are a little "psycho," puts men who are more "psycho" in the hospital, and returns those he believes are not "psycho" to duty. The soldiers are anxious to avoid return to their previous situation, do not want a Blue Discharge, and many of them have little confidence in the hospital because of their previous experience with doctors and the rather common belief that the Negro soldier must be "almost dead" to get a medical discharge. Those with sufficient aggressiveness may make a decision and plan their attack. Sometimes the decision is to get out of the Army at any cost, and they embellish their history with marihuana or other drug addiction, alcoholism or sexual perversion. When they desire hospitalization they may exaggerate all their nervous symptoms. If less aggressive, they will probably depend entirely on the somatic complaint which they believe is incapacitating.

Personal contact with many military psychiatrists has led the writer to conclude that they differ markedly in their understanding of the emotional problems of the Negro, especially when those problems are affected by or are the result of racial factors. One psychiatrist, after offering a rather dogmatic opinion concerning the Negro to a small group discussing this subject, admitted that his knowledge was the result of eight years of contact with his office maid, who was a

disciple of Father Divine. Another, after drawing a broad conclusion concerning Negro soldiers, admitted that his conclusion was based to a great extent on contact with six Negro members of a religious cult with doctrines that at least bordered on the subversive. Perhaps these examples are extreme, but there is little doubt that many psychiatrists have been affected by the motion picture and newspaper portrayal of the Negro. Certainly many fail to understand that a history of intermittent school attendance and frequent changes of jobs is not in some communities indicative of emotional instability, but the result of an effort to survive. They are not aware, furthermore, that freedom from psychopathic traits and a high degree of morality does not protect the Negro from numerous arrests on suspicion in many communities. Examples of this lack of understanding may be found in recent medical literature where studies have been published in which as many as 50% of Negro soldier patients were diagnosed as psychopaths.

Even a good understanding of the racial aspects of the emotional problems of Negroes is of little value if the examiner is unable to obtain rapport with his patient. It would be extremely helpful if a magic formula for gaining rapport with the Negro patient could be presented to the white psychiatrist. Unfortunately, no formula can be offered that will create a positive emotional response on the part of the patient toward the examiner with the necessary elements of confidence, trust and mutual good will. However, a better understanding of racial factors and their effect on emotional disturbances in Negroes would undoubtedly be of aid to the examiner.

The statements just made concerning rapport may be repeated in regard to therapy. In military clinics psychiatric treatment was limited to a great extent by time. However, the patient whose emotional disturbance has strong racial aspects will probably become completely amenable to therapy only when he believes the examiner understands the racial as well as the other aspects of his problem. The fact should also be kept in mind that frustrations due to race, as well as those engendered by other causes, are

MENTAL ILLNESS AMONG NEGRO TROOPS OVERSEAS¹

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The incidence of mental illness is commonly considered to be greater among the troops in theaters of war than in similar groups of soldiers stationed in the continental limits of the United States, or among civilians. This discrepancy must stem, in part, from the inability of the individuals concerned to adjust to the stern environment in which they find themselves. Since there appeared to be an unusually large number of Negro soldiers showing failure to adapt to army service overseas, an investigation was undertaken of the incidence of and dynamic factors in mental illness among troops both Negro and white in garrison at Biak, a tropical coral island in the Netherlands East Indies.

The patients were studied on the wards and in the out-patient department of the 9th General Hospital and data were obtained from other hospitals on Biak where Negro and white troops were treated. The personnel of three service units which were composed of Negro enlisted men under white commissioned officers were studied in detail and the findings compared to those obtained from a similar study of a white service unit of approximately the same numerical strength as the three Negro units combined.

QUARTERMASTER SERVICE COMPANY NO. 1

This Negro unit was organized in May 1943 as a Quartermaster Service Company and received training at Fort Custer, Michigan. Nearly all of the men were recent draftees from the New York-New Jersey area. Before coming overseas their commanding officer, who was well liked, was transferred to another company. He was succeeded by a strict, humorless man who was unpopular but considered to be fair.

The unit went overseas in November 1943

to Sydney, Australia. After two weeks they were shipped to Milne Bay. On January 7, 1944, they were moved to Oro Bay and thence to Cape Gloucester where they landed on January 13, a few days after D-day. There they were subjected to difficult living conditions and enemy bombings. The rains were heavy, the food poor and their work of building an airstrip hard. They took part in the landings at Hollandia and Biak under conditions of moderate peril from bombings. During the 14 months on Biak the unit did laboring work at a quartermaster dump. They lived in tents without floors, had few comforts and little recreation at first, but when the conquest of the island was secure they were moved to a reasonably comfortable area where facilities for baseball, radios and motion pictures were provided.

There were 15 courts-martial among these men, mostly for pilfering or refusal to work. Furloughs to Australia were given to only two individuals during the 21 months of service overseas. As in other companies, sexual tension was increasingly troublesome to the men and rose sharply after the arrival in February 1945 of a large company of white women of the WAC with whom the Negro soldiers were unable to associate socially. There occurred a corresponding increase in homosexual activities, and six habitual homosexuals in the organization no longer had to pay their partners. During and after a Japanese air-raid on Biak in March 1945, in which a large number of white men were killed and injured, several men in this organization became intensely fearful although none had been injured.

A total of 154 men from this organization was hospitalized on Biak, 76 of these in the 9th General Hospital; and of the 25 with psychoses, 35 with minor psychiatric disorders and 94 with medical and surgical conditions, 21, 17 and 38, respectively, were studied in the 9th General Hospital. Twenty-one were treated in the neuropsychiatric out-

¹ From the 9th General Hospital, United States Army, and the Departments of Medicine and Psychiatry of The New York Hospital and Cornell University Medical College.

patient department and 21 in the medical and surgical out-patient department of the 9th General Hospital.

The situations which were common to others in the groups studied have been well described in the unedited diary of one of the men from this unit. The viewpoint of this individual was characteristic. His first impressions of the combat zone were recorded thus:

January 13, 1944.—The place look very bad. A lot of bomb hole. We had to get off in water over our waist. And we had all our equipment on. Some of the boys fell down. The wave was very bad. The marines told us some weary story. We had to go right to work too. When we got finished we had to find a place to pitch camp. We were giving a place in the jungle to sleep. We had to pitch our little pup tent. None of us slept much that night. We hear a couple of shot and that all. Rain came all in our tent. And then there was an air raid and we were scare to death. The Jap drop bomb down by the air port.

January 14.—We got up and had jungle ration. It is terrible food. We had to sit around and found out we were going to move to. We move to one spot but the marines beat us to it.

We had to move again to a much better area. It was nice and clean. The cleanest spot on the island. We just know this couldn't be true. Anyway we put up our tent, and got the area clean up. We had the best place on the island, camp, tent and mess hall. The marines didn't have anything. When we eat, a lot of them come over and eat with us. We didn't mind. And they always told us some hell of a story. Then a lot of the fellow dig them self a fox hole. An some didn't. That night we had three air raid. Again they bomb the airport. Three was kill and 27 injury.

January 15, 16, 17.—These days we went on detail. We seen some Jap skull. Nothing new happen but we had a day air raid. And every night we had 4 or 5 air raid. And it rain every day and night we having seen the sun yet. And we still had to work in all the rain. And we had a lot of round two. We were just 2 miles one way and 6 miles another way from the front. And there are Japs out there behind our lines.

There was so much unnecessary shooting of guns that the authorities confiscated all their firearms. This indignity added to the desolate feeling of the soldiers. The loneliness, terror and boredom of the soldier who kept the diary were well expressed in his own words:

January 28.—My son birthday. I sat down a long time by myself and start thinking of when he was born last year. I felt very bad. Still raining and air raid.

January 29.—This is a day I will never forget as long as I live. We were working on the dock. And about 3 O'clock. About 10 fellow and myself was sitting on the shore. And the other men were unload ammunition on a small boat. Then all of a sudden. A Jap zero shot down out of know where and drop a bomb. I was the nearest one to where the bomb hit. About 40 or 50 feet away. It land about 3 feet out in the water. The power from the explosion knock me over. And the fellow sitting on the other side of me got hit in the stomach. And another one of our boys got his hand almost blow off. His hand was cut right up the center of his hand. I will never forget his hand. About 8 marines got hurt. Nobody got kill. I was very lucky to not get hurt.

January 30, 31.—The boys that got hurt left and when back to the main land. They might go home. Things are about the same. I haven't received any mail. Feel down and out.

February 6.—Still raining. Had a bad daylight raid. They shot at him but miss. Then two came back that night. It was like 4 of July. Everybody was shooting. Big flare was going of. An the big spotlight was turn on him. He ran like the devil. They miss him. Boy were we scare.

February 10.—A roomer that we might have a parachup invasion. But they having gave us our rifle back yet. They kept us up all night with raid. They drop a lot of bomb. We didn't shoot any down.

February 11 to 25.—Things are pretty safe now. We have been playing a lot of softball. I am booking agent for the team. Still raining hard and hot. I also wrote a letter to Blanche that I wish I never did write. I guess the devil made me write it. I am sorry about it. We seen our first movie show on the island yesterday.

The letter to Blanche was prompted by his not having heard from her in a week, and in it he implied that she might be being unfaithful.

About six men were wounded at Cape Gloucester. None was killed in battle but one man was drowned during recreational swimming.

On April 22 the unit made the D-day landing at Hollandia.

April 20, 21.—We was at last told that we are going to Dutch Guinea. That didn't make us feel to good. We know that there are three air field there and the Jap was sure to put up a fight. Then from know where more ship came up then I ever seen before in life. There was over three hundred ship in our convoy now. All kind of ship you could name. That made us feel very nice and good.

April 22.—It was early in the morning, just about dust. We could just see the land. We was moving in very slowly. Then the convoy split up into three parts. Then the convoy and destories and corvices move up in the front and they all started shelling. I never seen so many shell. Then the Hell Diver

came off the aircraft and start bombing and shooting all over the island. They kept this up for about 45 minutes. We was looking for Jap planes in the air at any second. But there were none. Then the infantry start going ashore in duck and amphib tanks. Then the LST start going into shore. We pull up to the beach and we had to run off and drop our equipment and start unloading the ships on the double. Then they said Jap plane. We all ran and hit the dirt or any hole near by. One boy jumps in a hole the Jap had for a latrine and did it stink. But it was only some of our planes going over.

Then I seen a big crowd down the beach. I when down to see what it is. It was General MacArthur. I went to see him. They was taken his picture. I think they took mind to. Because I was that close to him. Then a colored boy from another outfit caught a Jap with a knife.

April 23.—Today is my wife birthday and I have been in the army one year today. I was feeling very low today thinking of my wife and family as always. We eat and had to go down to the beach and work. We was working on ammo. And we heard that the infantry was moving very fast. That made us feel good. We go finish work late again that night. An before we go off. A Jap bomb that was laying on the beach went off. It was right by a fire which our shell hit the first day. When it go off we started going back to pancake hill to our hole. But we couldn't get by because a MP was standing down by the fire and said know one could pass. So we had to stay on the beach around the ammo all night. We started to eat our ration. An we heard a Jap plane. We all lay down. And we hear him dive. And then his bomb hit right in the middle of us. The tree i was laying under was on fire and all around me was burning. I didn't know which way to go. I ran to the beach and ran pass the other fire where the Jap bomb was laying and ran all the way to Pancake hill. After I got there some of the other fellow came up. We stood on top of the hill and watch the fire. It caught on to the ammo and it started exploding. I just knew a lot of our fellow got kill. The ammo and all the food was on the beach. And the ammo went off all night. We couldn't sleep for the noise. Then some one said the Jap was landing on the beach in barges. We was scare stiff, But it was only our barges.

April 24, 25, 26, 27.—The ammo and fire is still going off. We got our equipment and move to the other island. We made a count of our men. And about 30 was in the hospital and 5 missing. Some of our boys came out of the hospital and was just shook up.

April 28 to 30.—Things are going pretty good. Some of our boys that was in the hospital was send back to the mainland to a good hospital. Only one die. An a boy was in very bad shape. We hope they all will be alright. We when to a native village in our spare time and that is where I got drunk. I had that beer and whiskey. Some of the natives didn't look bad. And they were very nice. One of the boys took some pictures.

This disastrous Japanese bombing of the supply and ammunition dumps had impressed forcibly all of the soldiers from this organization and may have constituted an important stimulus to anxiety. Mention of homesickness occurs repeatedly in the diary.

July 5.—Today is my wedding anniversary. I am feeling very low today. I am so homesick. And to think I was thinking of you and thinking of me and I could get near you. I took out your picture and drank my beer and thought and thought.

The fighting had subsided. There was nothing but laboring work to do. The unit was assigned to the job of unloading supplies at the Base Quartermaster Depot. The emptiness of this one man's life was oppressive and he did not feel able to keep his diary any longer.

QUARTERMASTER SERVICE COMPANY NO. 2

This organization, made up of Negroes from nearly all states in the United States, but mainly from the south, came overseas directly to New Guinea in February 1944. While in the United States the personnel had been members of an Anti-Aircraft Coast Artillery Unit which was stationed on the Canadian border for a year.

During the fall of 1943 the Anti-Aircraft Battalion had been dissolved and the unit converted into a Quartermaster Service organization. The reason for the conversion was not divulged, but the company officers suspected that it was because of the generally low level of intelligence of the men. Only four men had an Army General Classification Test² above Grade IV. In general the men resented the change and many considered it humiliating to become service troops after having been originally trained to

² The Army General Classification Test is divided into five grades:

Grade I—Very rapid learners.

Grade II—Rapid learners. This group includes men who are suitable as officers and non-commissioned officers.

Grade III—Average learners.

Grade IV—Slow learners.

Grade V—Very slow learners. This group includes those who are so mentally limited that they cannot be expected to perform even simple assigned duties or to exercise the necessary precautions for their own safety.

be combat soldiers. There were few men in the company who were capable of assuming responsibility. Within 16 months all but one of those who came overseas as non-commissioned officers had been reduced in rank. Nearly everyone in the company had an opportunity at one time or another to serve as a non-commissioned officer. Many declined and few who accepted were able to discharge their duties satisfactorily.

After a few weeks of preparation at Finshaven, New Guinea, the company participated in the invasion of Hollandia on D-day, April 24, 1944. They were near a disastrous munition dump explosion set off by a Japanese bomb but suffered no casualties. Thereafter they were subjected to a few intensive bombings but engaged in no combat. A month after landing in Hollandia they took part in the initial assault on Biak where they functioned as the principal petroleum supply unit for the island. Again they were in moderate jeopardy from bombing and shelling but sustained no casualties.

As the fighting subsided the living conditions of the group were gradually improved and by December they were established in a clean area in tents and eating a reasonably good garrison ration. Movies and facilities for sports, as well as other customary special service entertainment, were provided. The officers' quarters were similar to those of the enlisted men. Most of the men worked either 8 or 12 hours at a stretch loading and unloading oil drums. Of the group only 10 men, who were granted furloughs to Australia, left the tropics during the first 16 months overseas. There was a moderate amount of drinking and horseplay among the men. Only six were tried by court-martial; their offenses were drunkenness, disrespect to superiors and absence without leave. The men constantly complained of being overworked although their commanding officer and the base officers who handled the assignments did not support their contention.

Approximately 10% of the men reported to the daily sick call. Most of them complained of headaches, pain in the back, weakness, lassitude and giddy spells. From October 1944 through July 1945, 121 were admitted to hospitals on Biak, 62 of these to

the 9th General Hospital; and of the 25 with psychoses, 25 with minor psychiatric illnesses and 71³ with medical and surgical conditions, 21, 18 and 24 respectively, were studied in the 9th General Hospital. In addition to the cases hospitalized, 5 men were treated in the neuropsychiatric out-patient department of the 9th General Hospital. In general symptoms began after about a year overseas and hospitalizations occurred after approximately 18 months.

SIGNAL HEAVY CONSTRUCTION COMPANY

This Negro organization was activated September 1, 1943, at Camp Crowder, Missouri. About half the number of enlisted men were from the south and the rest from Philadelphia and New York. Except for a cadre of 6 men trained by the Signal Corps, all enlisted personnel were assigned from Tank Destroyer units. Only 5 of the men of the company were rated above Grade V in the Army General Classification Test. After 8 weeks of basic training and 3 weeks of technical indoctrination at a Signal Corps school they were sent overseas March 21, 1944. Orders for overseas service were said by the men to have been issued earlier than planned because the unit was involved in a race riot. This supposedly arose from a disparaging remark attributed to a colonel who was serving as a member of the court in a court-martial involving an accusation of rape.

The unit arrived in Hollandia in May 1944. Sanitary conditions were poor. A staff sergeant was reduced to the grade of private for insubordination when he remonstrated with the commanding officer and blamed the 40 cases of dysentery which they had had on the inadequate sanitary measures. This sergeant happened to have the highest Army General Classification Test score in the unit (Grade II) and the non-commissioned officers held him generally in high regard. They felt that he had been unjustly treated and for that reason they all resigned their ratings in protest. The commanding officer accepted all the resignations except

³ This number does not include a group of 23 admitted on one day because of food poisoning.

that of the first sergeant and appointed new non-commissioned officers.

The organization came to Biak June 2, 1944, six days after the initial landings. They met no enemy opposition except for repeated bombing. The signal officer of the division to which they were attached used the company only for laboring work, cutting down trees in the jungle for telephone poles, digging holes in the hard coral and planting the poles. All the technical work of wiring was assigned to a white Signal Construction Company. This gave rise to widespread resentment among the men, both because of what they considered the indignity of laboring for white soldiers of a parallel unit and because the work was more arduous and hazardous than that of stringing the wire.

During the fighting on Biak 2 men of the company were killed and 8 were wounded. Throughout that period and up to December 1944 there were no neuropsychiatric casualties.

From June to August 1944, 5 men were brought before courts-martial, one for defecating on the road, two for leaving their places of duty and two for insubordination. All of the men were fined but in each case instead of entering the fine on the soldier's service record the commanding officer pocketed the money. Eventually this officer was punished and relieved of command. Another officer of the company was twice reprimanded for breach of censorship regulations. Once he wrote that all Negro troops were stupid and on another occasion he copied a soldier's letter he was censoring and sent it to his own wife. These occurrences became known and enhanced the general resentment of the soldiers. The officer who offended against the censorship rules became the object of special bitterness.

In February 1945 the division to which the company had been attached left Biak and the company was taken over by the Base Headquarters. The Base signal officer assigned these men to their regular technical work of wiring and as a result they were much more content. The company was moved to a new and more comfortable area and provided with the usual athletic and special service facilities.

At about the time this change occurred,

white WACs arrived at the Base and a white signal company whose camp site adjoined that of the Negro unit entertained the women regularly in their enlisted men's club. The music and noise of their parties could be heard in the tents of the Negroes at night. On the beaches the Negro men frequently encountered white soldiers in the company of WACs. Sexual tension among the Negroes mounted sharply and while many had had increasingly frequent sexual fantasies since coming overseas, they now found themselves able to think of little else. They were less and less inclined to work. The commanding officer stated that "for a three man job they liked to have eight men, and then one or two men worked while the rest talked to them." The soldiers, on the other hand, felt that they were overworked and complained that their accomplishments were not being adequately appreciated. Liquor was consumed in increasing quantities. Of three men tried by courts-martial between October 1944 and July 1945, two were arraigned on charges of selling homemade spirits. The other had been disrespectful to a non-commissioned officer.

From October 1944 to July 1945, a total of 88 men from this organization were hospitalized on Biak, 54 of these in the 9th General Hospital; and of the 18 with psychoses, 17 with minor psychiatric illnesses and 53 with medical and surgical conditions, 18, 10, and 26 respectively, were studied in the 9th General Hospital. Eighteen were treated in the neuropsychiatric out-patient department and 17 in the medical and surgical out-patient departments of the 9th General Hospital. Ten men with psychoses and 5 suffering from minor psychiatric illness were admitted during the months of June and July 1945.

HISTORY OF THE WHITE ENGINEERING AVIATION BATTALION

This organization had approximately the same length of overseas service and exposure to combat conditions as the three Negro units described. In September 1944 a study of its personnel was undertaken by the 9th General Hospital at the request of the Base Headquarters because the unit's command-

ing officer and medical officer felt that the soldiers were "going to pieces" from prolonged overseas service. The organization consisted of some 744 enlisted men and 33 officers who had received their initial training at Geiger Field, Washington, during the latter part of 1942 and the early part of 1943. The battalion went overseas in April 1943 and arrived in Sydney, Australia, May 21, 1943. It was sent successively to Brisbane, Townsville and finally to Oro Bay, New Guinea, on August 5, 1943.

In Oro Bay there were frequent enemy bombings and one man was killed. The unit built two airstrips during its stay of six months. In the early part of January 1944 the organization left Oro Bay and went to Saidor, arriving on D-day plus six. At Saidor these men defended one mile of beach in addition to their usual construction duties. They built one airstrip, constructed roads and operated a saw mill. Although the strip was bombed repeatedly while the men were at work upon it, there were no casualties. After 5 months at Saidor the group was transferred to Biak, arriving on June 8, 1944, 12 days after the initial landing. One company worked on an airstrip while it was still in the process of being cleared of Japanese troops. The men were subject to machine-gun fire almost constantly. Another company constructed buildings and similar installations and another operated a saw mill in an area infested with Japanese snipers and booby traps.

It is notable that these soldiers endured the same isolation from women as the negro troops discussed. At the time the study of their organization took place, no female enlisted personnel had been sent to the bases where they were stationed. Likewise, the same frustration of seeing others enjoying the company of women existed, since nurses were available as companions for officers. Throughout this period of sustained service in a combat zone, no furloughs had been granted in the organization. The men complained that they were worn out and morale was considered to be generally poor. The battalion had lost 15 men because of neuropsychiatric illness, an average of 4 per company. These illnesses were mainly

severe anxiety reactions which occurred during the periods of most hazardous service.

In the hospital survey, each man was given a physical examination and a brief psychiatric interview. No significant physical defects were discovered. Of the total of 744 men, 145 displayed evidences of mild psychoneurosis, 60 of moderate and 2 of severe reactions. A recommendation was made by the hospital that the entire unit be given a rest. Instead, a dozen furloughs were granted and the organization remained at the base until March 1945.

From September 1944 until March 1945, 62 men from this organization were hospitalized on Biak, 31 of these in the 9th General Hospital. None of these had psychoses. Of the 23 with minor psychiatric illnesses and 39 with medical and surgical conditions, 10 and 21, respectively, were studied in the 9th General Hospital. Of the 69 individuals seen in the out-patient department of the 9th General Hospital only 2 were sent to the neuropsychiatric clinic.

COMPARISON OF NEGRO AND WHITE TROOPS

During the period of observation (9 months) of the three Negro organizations their numerical strength showed the following variations: Quartermaster Service Company No. 1: 167 to 192 (average 183) men; Quartermaster Service Company No. 2: 176 to 213 (average 190) men; Signal Heavy Construction Company: 101 to 200 (average 168) men. The average combined strength of the three Negro organizations was 541. The white engineering organization which showed little variation in census from month to month had an average strength of 740 men during a seven month period of observation.

Fig. 1 illustrates a comparison of the relative incidence of medical, surgical and neuropsychiatric admissions to all hospitals on Biak from the one white and three Negro service organizations studied. The incidence of medical and surgical conditions as well as neuropsychiatric disorders was much higher among the Negro organizations than in the white unit. For the number of out-patients examined from these units in all hospitals figures were not available. At the 9th General Hospital, however, of the total white

out-patients seen 2.3% were patients of the neuropsychiatric clinic, whereas among the Negroes 43.5% were neuropsychiatric cases.

In addition to the detailed study of the four organizations described, a comparison was made of the relative incidence of neuropsychiatric illness in the total number of white and Negro service troops on Biak. During the period of observation there were

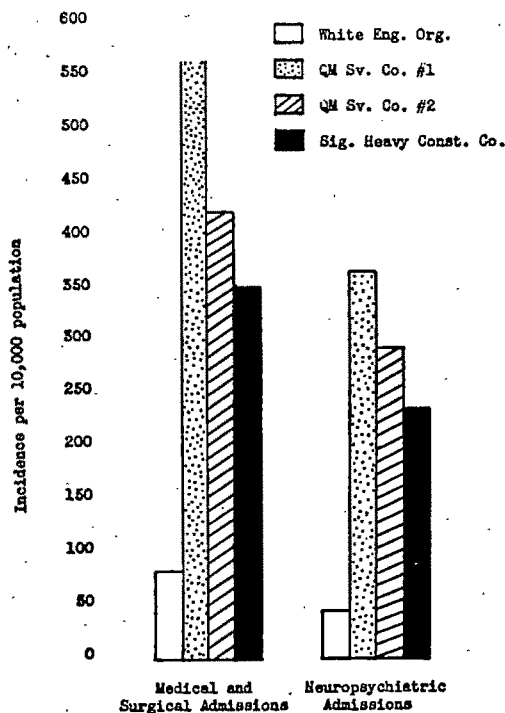


FIG. 1.—Comparison of average incidence of medical and surgical and neuropsychiatric admissions to all hospitals at Biak per 10,000 population per month for one white organization and three Negro organizations.

approximately 2.6 times as many white as colored troops stationed at Biak. Fig. 2 shows a comparison of the incidence of psychoses among white and Negro troops treated at all of the Biak hospitals from November 1944 to July 1945. Fig. 3 compares the incidence of minor psychiatric illnesses among white and Negro troops treated as in-patients. Fig. 4 shows the occurrence of all psychiatric disorders among white and Negro troops admitted to all hospitals.

Six hundred and forty-eight neuropsychiatric patients were admitted during this

period to all hospitals. The incidence among Negroes was 3.1 times greater than among the white troops. Of those suffering from minor psychiatric illnesses 233 were white and 215 were Negroes. The incidence was 2.4

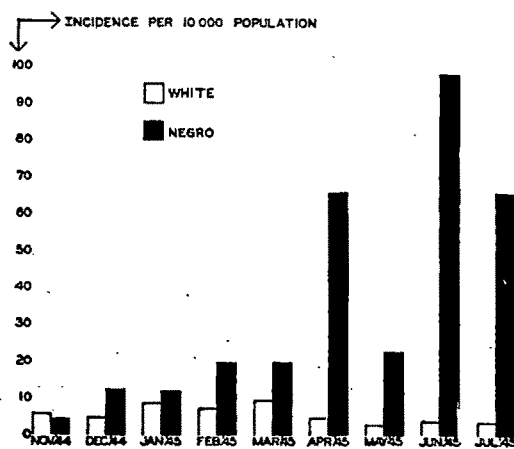


FIG. 2.—Comparison of incidence of psychosis among white and Negro troops treated at all hospitals at Biak from November 1944 to July 1945.

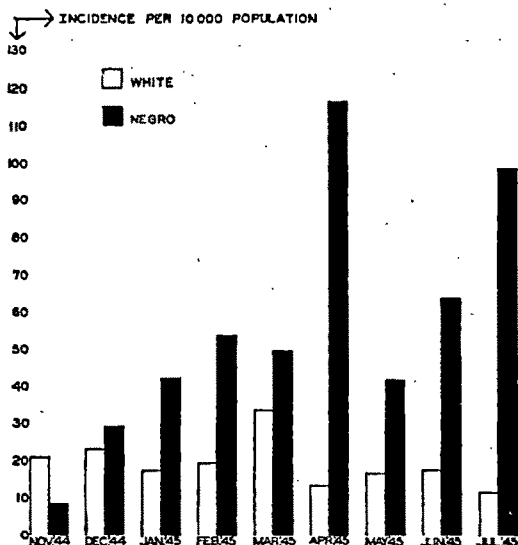


FIG. 3.—Comparison of incidence of minor psychiatric illnesses among white and Negro troops treated as in-patients at all hospitals at Biak from November 1944 to July 1945.

times greater among Negroes. Sixty-eight white men and 132 Negroes had psychoses. On Biak, then, psychosis was found to occur 4.9 times as often among Negroes as among white men. Others also have found a greater incidence of mental illness among Negroes

than among the white population. Wagner (1) reported the incidence in the following diagnostic categories, per 100,000 population in Cincinnati during one year:

	White	Negro
Neuroses	3.8	5.2
Manic-depressive psychoses ..	4.7	8.7
Schizophrenia	16.2	26.3
Undiagnosed psychoses	6.2	17.5

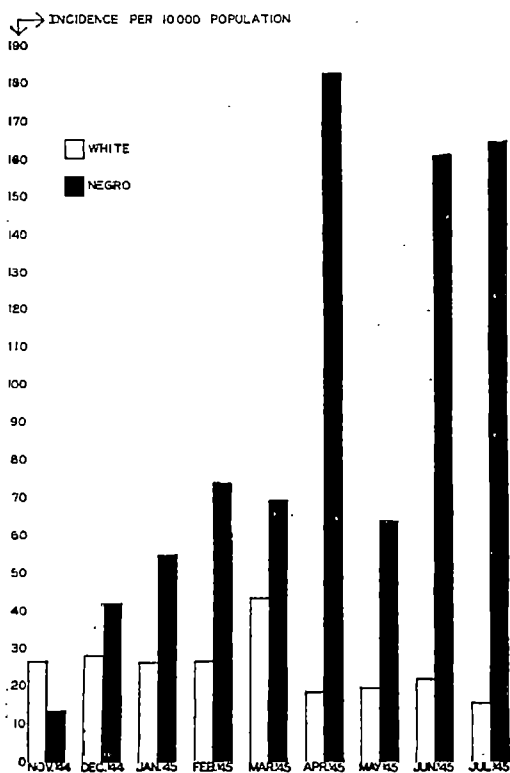


FIG. 4.—Comparison of incidence of all psychiatric disorders among white and Negro troops treated as in-patients at all hospitals at Biak from November 1944 to July 1945.

O'Malley(2) has found that dementia præcox is the preponderant mental disease entity among Negroes. Malzberg(3) noted that the Negro population of the State of New York had an annual rate of first admissions to all institutions for mental disease of 150.6 per 100,000 Negro population. This exceeded the comparative rate among the white population in the ratio of 2 to 1. The rate for dementia præcox was 44.4 and 19.2 per 100,000 for Negroes and whites, respectively.

The policy of the 9th General Hospital

was to treat patients with minor psychiatric disorders in the out-patient department (Fig. 5). There was a significant increase in neuropsychiatric illness among Negro troops as

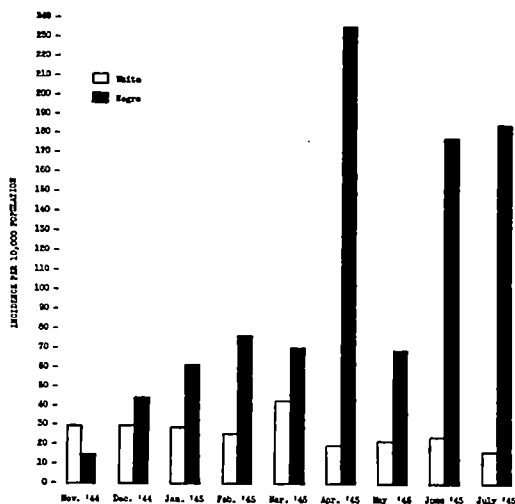


FIG. 5.—Comparison of incidence of minor psychiatric disorders among white and Negro troops treated as out-patients at the 9th General Hospital at Biak.

the time overseas became longer. In comparison, there was relatively little change in the incidence among white troops.

GENERAL PATTERNS OF REACTION

From the three Negro organizations studied, 59 cases of psychosis and 45 cases of minor psychiatric disorders were admitted to the 9th General Hospital. These admissions were classified as follows:

Diagnosis	No.
Psychosis, schizophrenia	46
Psychosis, manic-depressive	5
Psychosis with mental deficiency.....	7
Psychosis with psychopathic personality.....	1
Psychoneurosis	33
Psychopathic personality (asocial and amoral type)	4
Psychopathic personality (homosexuality)...	2
Alcoholism	2
Simple adult maladjustment.....	3
Mental deficiency	1

From the above classification one is impressed by the large number of patients with schizophrenia. This diagnosis was always adopted with caution; clear cut evidence of

disorganization of behavior, with hallucinations and bizarre trends being required before it was made. Investigators have found the negroid personality hard to evaluate, the distinction between psychologic and psychopathologic relationships to be frequently obscure and the differentiation of the various psychoses difficult of accurate clinical appraisal(2, 4, 5, 6). In doubtful cases the patients were labelled with milder diagnoses. As a result, in many instances, later definite evidences of psychosis necessitated a change in diagnostic classification. For example, 3 cases who initially displayed amnesia were at first considered hysterical. In two of these patients definite evidences of catatonic schizophrenia developed. In other instances where complaints of bodily pain were prominent, the symptom was at first cautiously considered to be part of a malingering, hysterical or hypochondriacal reaction but later proved to constitute a somatic delusion. A few patients in whom psychoses were suspected were sent to a trial of duty. Nearly all of these were shortly returned to the hospital showing more severe symptoms of psychosis than before, usually auditory and visual hallucinations involving members of their family or sweethearts. Even in patients with minor psychiatric disorders grossly illogical thinking was commonly observed when intellectual resources seemed normal. The Negroes in the group observed appeared to be especially prone to develop disorganization of thinking and hallucinatory experiences. Evarts(7) has suggested that the apparent ease with which the mentally ill of the Negro race develop hallucinatory experiences and ideas of reference may be related to the fact that they are but a few generations removed from a culture in which such mental "abnormalities" are incorporated in the actual beliefs and practices of their every day lives. In individuals studied at the 9th General Hospital psychotic manifestations appeared to be relatively superficial and easily acquired but in most cases they failed to disappear during a two or three week period of observation in the hospital.

The finding of mental deficiency (mental age below 9 years, as tested by Herring revision of the Binet-Simon test) was noted in

approximately half of the Negro patients seen on the neuropsychiatric wards. It was as common among neurotic patients as among psychotic ones.

DISCUSSION OF DYNAMIC FACTORS

Among the possible causal factors to be evaluated in the emotional and mental reactions of these troops were:

1. *The Selection of Men at Induction Centers.*—The frequent discovery of mental deficiency and evidence of severe personality disorder, which existed prior to induction, suggested that the standards for selection had been lower for Negro than for white soldiers. Poor selection, thus, may have been a large factor in causing the preponderance of mental illness among Negroes. Evidence which indicates the correctness of this inference is found in the reports of the director of Selective Service in which it is stated that prior to May 14, 1941, there had been inducted 2,663 whites and 3,711 Negroes who could not read or write, although Negroes constituted only 10.6% of the total registrants as of September 30, 1941(8). In a later report(9) it was stated that after May 15, 1941, when the fourth grade achievement test in reading and writing was adopted, the rejection rate among Negroes was five times that for whites. Accordingly, in August 1942, induction stations were authorized to accept for induction educationally deficient registrants not to exceed 10% of the white and 10% of the Negro registrants inducted on any given day. In regard to the application of this ruling, the report comments, "This relaxation of the educational deficiency regulation has been very liberal at some induction stations." In view of the above mentioned rejection rates for whites and Negroes, the necessity for meeting draft quotas may have led to induction of a larger percentage of Negroes than of whites who could not meet the requirements.

In a table of the Selective Service report of 1943-44(10) which indicates the percent distribution of principal causes for rejection at local boards and induction stations from April 1942 through March 1943, it is shown that 14.2% of whites and only 5.8% of Negroes were rejected on psychiatric

grounds. Since the incidence of mental illness has been found to be greater among the Negro than among the white population (1, 3), it seems likely that different criteria may have been used for the rejection of Negroes and whites.

2. *The Home and Educational Background.*—It is well known that the environmental situation of Negroes is in general poorer than that of the white population. Negroes often have been forced to live in tenements in the cities and in shanties in rural areas. Their lack of economic resources and opportunities is conducive to a feeling of insecurity. In many sections of the country educational opportunities have been inadequate. In World War II, when standards of a fourth grade education or equivalent were set up, a large percentage of Negroes was being rejected for failure to meet this standard. Selective Service officials state that the majority of these men were from areas "where educational opportunities just were not available to them" (8). A study of rejections of Selective Service registrants by race on account of educational and mental deficiencies was made (11). In every instance a positive correlation was found between educational facilities offered and rate of rejection.

3. *The Emotional and Intellectual Resources.*—Although individual differences make generalization hazardous, the Negro and white groups appeared to be distinguishable by certain observable emotional and intellectual characteristics. Whether determined by constitution or by early life experiences, they, nonetheless, appeared to differentiate the Negro group from the white group as a whole. Johnson (12) was able to distinguish characteristic Negro personality and cultural traits from a collection of writings of both Negro and white authors, which appeared to represent a fair consensus of opinion. Pintner (13) suggests that a comparison of results of ordinary intelligence tests among Negroes and whites may not be valid and may require special weighting of early environmental factors.

Pruchomme (14) concluded that Negroes are more labile in mood and more easily frightened than white men. Among the pa-

tients of the present study, there was some evidence to support this conception. Near panic reactions were more common among Negroes than whites at the time of the bombing of Biak in March 1945, although no Negro unit was in the vicinity of the bombs dropped. In many instances it appeared that this surprise bombing served as a precipitating factor in the development of psychoses. Most of the men had been conditioned by exposure to previous bombings. Such a reaction is illustrated by the following case which also shows the effect of poor selection and the difficulties of adjustment in individuals with meager intellectual resources.

The patient was a 28-year-old private, first class, who had become panicky during the initial assault on Biak in June 1944. He had run away from his area and had been found on the road in a confused condition. He was hospitalized and evacuated to a non-combat area but was returned to his organization two months later. Thereafter he occasionally noted vertical headaches with giddiness and evidences of confusion. In March 1945 after the surprise bombing of Biak, he was admitted to the 9th General Hospital in a state of acute panic. From this he recovered quickly and was again returned to duty. He continued to have some tachycardia and tremulousness, became increasingly preoccupied with his sexual desires and felt that he was losing his mind. He was finally readmitted to the Hospital in July 1945, complaining of a sticking pain beneath his heart, going through to his back. He was convinced that he had acquired a serious cardiac disease. He also persistently heard his name called when no one was around. A review of his past history showed that he had had difficulty getting along at school and had left in the fifth grade at the age of 15, not having learned to read or write. He had wet the bed until the age of 13 and had had recurrent pains in the abdomen and back for many years. In civil life he had worked as a farmer, was active sexually and attended every church service. In the army he considered himself mistreated and stated that non-commissioned officers had "worked me too hard" and commissioned officers were "too hard to please." The diagnosis was psychosis with mental deficiency based on confusion, hallucinations and bodily delusions.

Lind (15) found that the dreams of the Negro are simpler than those of the Caucasian and that the psychological activities of the former are analogous to those of a child. Among the Negro troops of the present study there was noted a lack of expressions of feeling and an inconsistency of reaction. A game called "The Dozens" was popular among them. To play, one soldier put an-

other in the "dozens" by making obscene and abusive remarks about the latter's mother, sister or occasionally his wife. The soldier thus insulted countered by trying to surpass the other in fantastic opprobrium applied usually to his mother. It was noted that while such vilification of one another was accepted in good part by these Negro soldiers, even slight profanity used by a white officer in conversation with them was invariably considered offensive.

Officers in charge of Negro troops frequently commented on the difficulty in assuming responsibility experienced by their men. The Negro often expressed a stronger need to be watched over and cared for than did the white, seemed to have more trouble in adapting to many difficult situations, and to be less capable of sustained mental and physical work.

It is a common but probably mistaken idea that it is usual for normal Negroes to hear voices or to see visions. However, certain psychological differences between the Negro and white man that bear on this question, have been described. O'Malley(2) found that Negroes are superstitious, changeable in impulse and emotion, lacking in grasp of abstract ideas and tend to transform the visionary into reality in such a way that the transition between real, supernatural and hallucinatory experiences is difficult to establish in many cases. Lewis and Hubbard(5) found that the American Negro, in contrast to more highly civilized races, shows a comparative lack of self-consciousness, draws a fainter line of demarcation between will and destiny, illusion and knowledge, and dreams and facts, and makes less distinction between hallucinations and objective existence.

It was impossible to determine how much heredity, environment or unsuitable selection of troops influenced the finding of low intelligence. Many of the men had such limited intellectual resources that it was difficult for them to cope with responsibility and compete on an equal basis with white troops in similarly placed units. Moore(6) believed that many Negroes are perhaps rated mentally deficient when the deficiency is in the content of their environment; that rough treatment, ignorance and unsound teaching are re-

sponsible for their mental simplicity and lack of sophistication.

4. *The Emotional Needs.*—Compared to white men, the emotional needs of the Negro appeared to be fewer, but prominent among them was the sexual drive. The lack of sexual gratification was perhaps the most frequently expressed source of conflict. In civilian life sexual expression had assumed in many a place of primary importance as a means of satisfaction and security. Thus, sexual desire appeared to be stronger in the Negro than in the white man. Some sociologists have felt that in peoples native to tropical areas sexual drive is greater and that more premium is put on sexual potency than among people in temperate areas where, industry, inventiveness and ability to combat the elements are necessary to survival and are recognized as qualities that receive the greatest social approval. Perhaps through centuries of selection the Negro has developed greater libido as an inborn trait, and, therefore, sexual deprivation may be particularly difficult for him. Possibly his libido has assumed anthropologic importance because of its symbolism of maleness and supremacy, its competitive value and the social premium placed upon sexual potency. During the long overseas periods of isolation from Negro women, mounting sexual tension and preoccupation became extremely troublesome. The following case is illustrative.

The patient was a 22-year-old private who in May 1944 had become tense, tremulous, and subject to nightmares when his unit invaded Biak. These symptoms subsided and were not troublesome until the bombing of Biak in March 1945 when he again developed anxiety. In June his girl stopped writing to him and he became increasingly seclusive, irritable, sleepless, preoccupied with bodily change and subject to nightmares. He thought constantly about women, resented the white outfits having WACs, thought that Negro WACs should be brought overseas and felt that everyone was against the Negro. He often could hear someone coming after him and talking about him when no one was around. In civilian life he had been active sexually but had had no interest in marriage. He occasionally had smoked marijuana. When inducted in May 1943 he resented coming into the army and felt that Negro troops got "the short end of the stick." The diagnosis was schizophrenia, based on confusion, auditory hallucinations, fixed bodily ideas, paranoid trends, loss of intellectual assets and defective insight.

Homosexuality was common. The Negro troops seemed to have less sexual inhibition and to resort more easily to sexual perversion. During the period when there were white women on the island homosexuality increased in incidence. Confirmed homosexuals usually made the sexual advances.

In many patients mistaken ideas about sex gave rise to anxiety. Some felt that frequent sexual intercourse was necessary in order to maintain mental health. In many instances frequent masturbation was a source of both gratification and conflict. Transvestitism was rare. However, in one organization parties were held on Saturday nights, in which many men appeared dressed as women and at which homosexual practices were common.

5. *The Home Problems.*—Problems at home frequently had deleterious effects on the morale and emotional adjustments of the men. Among the most troublesome factors were economic difficulties, illnesses or deaths of relatives and infidelity or suspected unfaithfulness of wives or sweethearts.

6. *The Problems and Attitudes of a Minority Race.*—The social discrimination practiced against their race was often deplored by these patients. Many felt that they had very little to fight for. There was a paranoid coloring to their thinking which had some basis in reality. The phrase "all men are created equal" frequently was interpreted to mean that all men are equal in endowment and should have equal reward, whether earned or not. White officers had to be particularly attentive to these men to avoid being reported to higher authorities for discrimination. One patient who previously had felt greatly discriminated against in his home town and who had been frightened by the lynchings in his section of the south, had run away from home during adolescence and settled in the north only to find there, too, discrimination existed. The writer of the diary quoted above expressed resentment against the Army and against social discrimination.

Take D-days. Everybody is buddies and everybody talk to you. If you don't have a fox hole in a raid maybe a white fellow call you to come get in his hole. That lasts like that during combat until the island start getting secure. Then it all change. A colored fellow can't get a lift in a jeep and six

steps further on they pick up a couple of white fellows. Also colored man can't use the white man's latrine at the base. They gotta dig their own. How that make a fellow feel? Another thin, there is always a colored checker at the gate of the quartermaster dump. The day the General come to inspect the Captain told our Sergeant to remove his checker so he could be replaced by a white soldier. Our Sergeant don't know what to do. He cry like a baby.

7. *The Type of Officers in Charge of the Men.*—Many of the officers in charge of our patients were not suited to lead Negro troops because of temperament or deficiencies in experience and training. In some instances less capable officers had been assigned to Negro units. Some of these men considered Negro troops the "cross" they had to "bear." The frequent dissatisfaction of the white officers associated with Negro troops had an adverse effect on morale. In organizations which had both Negro and white officers there was often much tension and friction, exerting an unwholesome influence on the enlisted men.

8. *The Attitudes of Various Oriented Officers Toward Illness.*—Illnesses among Negro troops in the Pacific theatre were regarded in general with skepticism by line officers and battalion surgeons. Patients with poorly defined somatic complaints were commonly considered to be malingerers or "gold bricks" and were treated with casual indulgence, scorn or reprimand. This unsympathetic care gave rise to feelings of frustration and strong resentment. Often because of concomitant evidence of psychopathic personality and especially alcoholism, symptoms of psychosis were ignored.

9. *The Character of the Work Assigned.*—The type of work assigned caused considerable hostility. Although in general Negroes had not been subjected to the hardships of prolonged periods on the front lines, they were frequently assigned to especially hard, dull, laboring details.

10. *The Closeness of Association with Other Men.*—The men lived in circumscribed cleared areas in the jungle and were crowded together in small tents. There was no opportunity for diversion away from their camps so that escape from interpersonal antagonisms was almost impossible. Close association with other Negroes of a crude type

was upsetting to the more sensitive members of the group. Some of the men were very obscene and profane and threatened and actually resorted to violence.

11. *Certain Peculiar Problems Incident to Their Overseas Situation.*—As the length of time overseas became more prolonged the reaction of these men to their isolation became pronounced. In May 1945 the abolition of the rotation plan whereby men would be eligible for return to the United States after 18 months of overseas service, had an adverse effect on their morale. This was because under the point system that was substituted for the old plan many men became ineligible for return to the United States. Accordingly many applied for special leaves to the United States for rest and rehabilitation. When all of these requests were turned down, hope of escape from what they considered an intolerable situation on Biak disappeared. The incidence of neuropsychiatric diseases then mounted further.

The question has been raised as to the ability of Negroes to meet the stresses of a civilization developed by the white man, including the rigors of army life. The whole problem of his adjustment is too complicated to warrant any dogmatic statement. Careful study is needed in order to determine the capabilities and limitations of the Negro in the Army. The roots of his difficulty in adjusting emotionally often seemed to lie in his problems as a member of a minority racial group trying to compete with white men in a society prejudiced against him. The development of paranoid trends and taking refuge in fanciful thinking might be expected in such a setting. Furthermore, thoughtful Negroes, in view of their experiences at home, were not impressed by our national propaganda which justified our fighting on the basis of protecting the rights of men, preserving democracy and promoting individual freedom and equality. Personality variations are so great that caution must be used in applying generalities to the individual. The conclusions drawn should not be applied to Negro troops as a whole unless other evidence has been obtained which might indicate that the small numbers considered in this study are characteristic of the Negro as a racial group.

SUMMARY AND CONCLUSIONS

Data were obtained on the incidence of mental illnesses in Negro troops stationed on an isolated island in the Southwest Pacific and comparisons made with similarly situated white troops.

1. The incidence of psychoneuroses and psychoses was found to be appreciably higher among Negro than among white troops.

2. The Negro appeared less well equipped by virtue of emotional and intellectual resources to adjust to war zone conditions of bodily hazard and isolation from women.

3. The rigors of military discipline, long working hours, and necessarily meager facilities for entertainment in the war zone acted to enhance already existent feelings of maltreatment and racial discrimination among Negroes.

4. Screening out by the induction centers of those unfit for military service because of mental and emotional defects seemed to have been less painstakingly performed among Negroes than among white men and this may have been a factor in the high incidence of psychiatric illness.

5. In many instances the officers were unsuitable to lead Negro troops.

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REVIEW OF PSYCHIATRIC PROGRESS 1946

HEREDITY AND EUGENICS

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Steady progress in appraising the effect of genetic phenomena in relation to mental disorders was apparent throughout the neuropsychiatric literature of the past year. In a long uphill struggle for scientific equality in debating the relative potencies of nature and nurture in the development of "endogenous" psychoses, medical genetics finally appeared to have reached the stage where, in the opinion of Hoskins(1) and other writers, the nurture school found itself charged with the "burden of proof" for conventional generalizations. The changing trend was noticeable not only in the post-war curricula and standard books of psychiatric post-graduate instruction, but also in recently published textbooks of abnormal psychology such as that of Landis and Bolles(2).

Much of the credit of deflating current versions of anti-Mendelian theories implying "inheritance of acquired characters" was earned by Dobzhansky(3) and Dunn(4). In critical digests and the former's literal translation of the latest book of the self-styled Russian fundamentalist and Academician, T. D. Lysenko, they showed the fallacies of the work that had been interpreted in the sense of the inheritability of direct environmental influences. They concurred in a categorical denial that Lysenko's widely popularized ideas were supported by adequate experimental evidence or represented more than a crude restatement of the writings of nineteenth-century biologists.

In striking at another "sociogenetic" anachronism of contemporary psychiatry, Kallmann and Mickey(5) advocated a redefinition of the old concept of induced insanity or *folie à deux*. They favored restriction of the term to the transference of circumscribed delusions in closely associated persons not related by blood, that is, in marriage partners and intimate friends living together. Their contention was that loose application of the term to the occurrence of any psychotic syndrome in consanguineous family units disregarded elemental statistics of chance

distribution and merely obscured the meaning of average expectancy figures obtained in representative samples of twin pairs and other sibship groups.

Of the twin studies published last year, the reviewer's final analysis of an unselected series of 794 twin index families(6) provided definite evidence in favor of the genetic theory of schizophrenia. The concordance rates for 174 monozygotic and 517 dizygotic twin pairs showed a statistically significant difference which approximated the ratio of 1:6. The difference increased to a ratio of 1:55 when the two twin groups were compared with respect to the course and outcome of the disease. Therefore, the ability to respond to certain stimuli with a schizophrenic type of reaction (specific predisposition) was assumed to depend on the presence of a single-recessive factor which must be inherited from both parents. Constitutional ability to resist the progression of a schizophrenic psychosis was classified as a non-specific, graded character controlled by a multifactorial genetic mechanism.

Other twin studies of psychiatric interest included the reports of Riecker(7) on peptic ulcer, of Werne and Garrov(8) on fatal anaphylactic shock, and Pacheco e Silva and associates(9) on the "unitary" nature of spinocerebellar degeneration. Strandkov and Diederich(10) studied the appearance of the Rh blood factor in twins, and Kallmann and Anastasio(11) reported that concordance as to suicide does not seem to occur either in monozygotic or in dizygotic twin pairs, even if the histories of the twin partners are very similar in regard to environmental background factors and psychotic manifestations.

Riecker's emphasis on the psychosomatic connections between genetically determined personality patterns and such localized internal diseases as peptic ulcer and coronary thrombosis was underlined by Dock(12), who attributed the much higher death rate of coronary disease in males to apparently

inherited sex differences in cholesterol metabolism and in the thickness of the coronary intima. Similar genetic relationships were assumed by Krauss(13) in regard to post-choreic personality deviations, and by Landis and Cushman(14) in regard to the tendency to compulsive drinking. Genetically more specific was the discussion of the type of inheritance in Friedreich's ataxia by Lipson and DeNardi(15) who observed three cases in a father and his two sons, and by Beers and Cheever(16) who studied a family with eighteen affected males and two affected females in six generations. The present state of information regarding the hereditary forms of mental defect and epilepsy was reviewed by Halperin(17) and Kallmann and Sander(18), respectively.

General problems of human inheritance were taken up by Myers(19) in a comparative study of instincts and by Huntington(20) in a widely discussed book "Mainsprings of Civilization." In interpreting civilization as "the unfinished product of some great evolutionary force which permeates all nature," Huntington stressed the interdependence of its three main directive principles, namely, biological inheritance, physical environment and cultural endowment. His search for biological phenomena as potential causes of different cultural developments led him to both an unconventional emphasis on the factors of selective migration, lethal selections and selective marriage and to the interesting suggestion to replace the amorphous concept of race with the anthropologically less objectionable concept of "kith," that is, a group of people who are "relatively homogeneous in language and culture and freely intermarry with one another." The main significance of kith formation was claimed by the author to rest upon the tendency to maintain continuity in distinctive characteristics over successive generations despite a certain heterogeneousness in anatomical traits, and upon its direct relationship to different reproductive trends in technically advanced, competitive societies.

The eugenic aims of a positive, democratic population policy were reformulated in a stirring bulletin of the British Eugenics Society(21). The contrast between the liberal and the authoritarian application of eugenic principles was shown to be in the

use made of the expert. In a liberal system of eugenics which concedes freedom of choice and independence of action to the individual, the function of the expert was postulated to be advisory and devoid of discriminative powers, although widely advertised and really accessible to everyone. The main standards of positive eugenic value were proposed to be (a) sound physical and mental health and good physique, (b) intelligence, (c) social usefulness, (d) absence of dysgenic family defects, and (e) philoprogenitiveness (love of offspring). In outlining the characteristics of a favorable environment, the emphasis was placed on (a) the removal of social and economic deterrents from parenthood, (b) the inculcation of a eugenic conscience, (c) universal accessibility of knowledge as to how pregnancies can be regulated, and (d) the establishment of facilities by which every engaged or married couple can obtain the most up-to-date scientific guidance on genetic problems. Authoritative information about birth control and voluntary sterilization was suggested to be in accordance with the family's religious beliefs. The decided advantages of such a democratic program of eugenic population policies were brought out clearly by Bigelow(22).

The dysgenic rôle, ascribed to phenylketonuria, Rh blood incompatibility and other foetal antigenic influences through the causation of mental deficiency, was widely recognized by research workers and editorial writers. In order to diminish such disastrous effects of marriages between mixed Rh blood types as were described by Sonn and Wiener(23) as well as by Snyder and associates(24), the proposal was made in the *New York State Journal of Medicine*(25) to include a mandatory determination of the Rh factor either in the premarital serological test or, at least, in the prenatal examination of every pregnant woman. The advisability of this plan was underlined by Penrose's theory(26) that the genetically determined group of foetal growth anomalies due to antigenic incompatibility of mother and foetus may extend to mongolism and zygodactyly. Another interesting finding of Penrose(27) indicated that phenylketonuria may be linked genetically to the blood agglutinogens A, B and O.

The most effective eugenic procedure for

the prevention of phenylketonuria was seen by Penrose(28) in discouraging consanguineous matings in affected families and in a systematic attempt to reduce the matings of two carriers. Eugenic significance was also attached to Penrose's genealogical data on 144 cases of anencephaly, spina bifida and congenital hydrocephaly, re-emphasizing the rôle played by advancing maternal age in this group of malformations(29); to McGregor's report on a family showing association of mental deficiency with nystagmus, myopia and congenital eye defects(30); and to Harris' observation of microspermia in a family distinguished by low fertility and the tendency to produce predominantly male progeny(31).

Statistical information regarding the use of selective sterilization as a prophylactic measure for the prevention of mental defect was supplied by Scott Johnson(32) for the State of New Hampshire, by Butler(33) for California, and by Gamble(34) and Olden(35) for all the 27 American States which still have eugenic legislation (exclusive of the State of Washington where the sterilization law was declared unconstitutional in 1942). From 1919 to 1943, the sterilization program of California was applied to 4,310 mental defectives according to Butler, and to a total of 16,332 abnormal persons according to Gamble. Both writers agreed that the program had been a social and financial success.

The total number of officially reported sterilizations up to January 1, 1946, amounted to 45,127 cases. In relation to the total population, Delaware appeared to have made the most extensive use of selective sterilization with 238 operations per 100,000 inhabitants, followed by California, Virginia, Kansas and Oregon. In 1943, Utah had the most active sterilization program (12.1 per 100,000), with Virginia, North Dakota, Delaware,

Nebraska and California following. A total of 1,336 sterilizations were performed in 22 states during 1945.

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NEUROPATHOLOGY, BIOCHEMISTRY AND ENDOCRINOLOGY

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Many articles this year seek to evaluate shock therapies, prefrontal lobotomy and continuous sleep treatment. A vast amount of clinical material has been collected, stimu-

lating further interest both in the clinical and the theoretical issues involved. An excellent book by Kalinowsky and Hoch(1) provides a concise and comprehensive pre-

sentation, incorporating the ideas of the various psychiatric schools of thought in a critical evaluation. Extensive consideration is given to the practical aspects of administering insulin and electric shock. The authors conclude that shock treatment is an unspecific form of therapy and that much research is still needed.

Several reports illuminate, obliquely at least, the problem of multiple sclerosis and other demyelinating diseases, suggesting the role of vascular disturbance as an etiologic factor. Roizin, Helfand and Moore(2) believe that disseminated, transitional and diffuse demyelination belong, from a histopathologic point of view, to the same group of primary demyelinating processes. Cordes(3) observed an unusual type of foveo-macular retinitis found primarily in the navy personnel that served in the South Pacific combat zone. The lesion was limited primarily to the fovea and started with a macular edema and loss of foveal reflex. In the later stages the picture was that of a hole or cyst in the fovea surrounded by a gray area of 0.5 to 1 disc diameter in size. Of the many etiologic causes considered, only two were thought to deserve serious attention, namely solar retinitis and angiospastic retinopathy. The former was rather conclusively ruled out, according to the author. Because of this suggestion of angiospasm, the paper seems pertinent to the present discussion. Scheinker(4) pointed out that a great number of pathologists teach that in the absence of organic disease of blood vessels in the central nervous system, such as arteriosclerosis or syphilis, the alterations in nerve tissue must be interpreted as "primary degenerative" or "toxic." Only recently has attention been called to the importance of functional or reversible circulatory disturbances described as "vasoparalysis" and "vasothrombosis." A change in caliber of a blood vessel may be as detrimental to brain tissue as a mechanical obstruction caused by arteriosclerosis. Morrison(5) exposed dogs and monkeys daily to atmospheres of low oxygen concentration. With repeated exposures to mild hypoxia, it was observed that the first histologic changes occurred in the cell bodies of the cortical gray matter. When the oxygen was reduced to 10 volumes percent the white matter became involved and pre-

sented a pattern of demyelination with a resemblance to Schilder's disease. Carter(6) treated 20 cases of multiple sclerosis by the use of histamine intravenously; 17 failed to show any improvement.

Engel, Ferris, and Romano(7) demonstrated abnormal electrical activity from one occipital cortex in 3 instances of spontaneous scintillating scotoma with homonymous visual field defect occurring during attacks of clinical migraine. Irregular, slow waves were recorded from the contralateral occipital cortex while regular normal activity was recorded from the ipsilateral occipital cortex. With disappearance of scotoma the electroencephalographic abnormalities also disappeared.

Feldberg and Mann(8) confirmed the observation that homogenized brain tissue synthesizes acetylcholine anaerobically in the presence of adenosinetriphosphate and choline. Feldberg(9) has shown that acetylcholine is synthesized by slices of brain tissue. Dried and powdered brain substances when suspended in physostigmine-saline solution also synthesized acetylcholine. The process was accelerated by the presence of ether and depressed by oxygen lack. Glucose accelerated synthesis in fresh brain slices. Calcium ions inhibited synthesis while potassium chloride increased synthesis.

Bruch and McCune(10) examined the effect of adequate treatment with thyroid hormone as judged by physical progress on the mental development of congenitally hypothyroid children. Although there is a distinct relationship between early, adequate treatment and subsequent physical development, a comparable relationship is absent, or at least highly imperfect, with respect to mental development. The intellectual inferiority is due in part to a defect in cerebral development.

Taubenhaus and Engle(11) studied a man, age 23 years, suffering from idiopathic hypoparathyroidism and epilepsy. Therapy of the tetany led to a complete cessation of the epileptic seizures, despite a discontinuation of phenobarbitol. They suggested that the low level of serum calcium acted as a trigger agent for the epileptic reaction.

Schweitzer(12) found that adrenalectomy did not lead to adynamia of directly stimulated skeletal muscle as long as the arterial

blood pressure was within normal limits. Forster *et al.*(13) reported convulsions which developed in a young boy with Addison's disease who was treated for two years with desoxycorticosterone acetate. Autopsy revealed degenerative changes in the cerebral blood vessels. Ungar(14) found that the pituitary-adrenal reaction to stress was inhibited by splenectomy. It was also observed that spleen extracts contain an active substance which can reproduce the reaction to the original stimulus.

Rand and Courville(15) made a detailed study of nerve cell damage after fatal injuries to the brain. The occurrence of definite and widespread chromatolytic changes in the nerve cells, which may persist for some time before reversible change takes place, furnishes a possible basis for the persistent psychic residual disturbances which so often follow craniocerebral injuries.

Horvitz and Uiberall(16) reported neuropsychiatric changes in 64 cases of manganese poisoning among workers in manganese mines in Chile. The prodromal symptoms were headache, weakness, pain in the muscles, sialorrhea and somnolence. The characteristic mental symptom was a manic syndrome. Forty-one showed neurologic changes usually related to involvement of the extrapyramidal system. Richter(17) produced symptoms of intoxication in 4 monkeys poisoned with carbon disulfide by exposing them to inhalation of the vapor. There was extensive, bilateral and symmetrical necrosis of the globus pallidus and the zona reticulata of the substantia nigra. The monkeys presented profound motor disturbances resembling the parkinsonian syndrome. Newell and Lidz(18) reported 28 cases of toxic psychosis following the therapeutic administration of atabrine. Seven other patients developed generalized convulsions.

Granit and Skoglund(19) showed that nerve impulses transmitted over efferent fibers in a mixed nerve are relayed to afferent fibers in the same nerve at a region of injury caused by crushing or cutting the nerve. The cut end of the nerve behaves like an artificial synapse. Martin(20) feels that Hughlings Jackson's theory of the "discharging lesion" is capable of a wider application in clinical neurology than has hitherto been

accorded to it. Phenomena of abnormal discharge are not necessarily transient.

Daly(21) stated that disseminated lupus erythematosus is a systemic disease which may produce diffuse damage to the central nervous system. Clinical manifestations include toxic delirium, frank psychosis, coma and convulsions. Neurologic examinations show scattered findings which shift rapidly on successive examinations. The pathologic picture is one of diffuse nonspecific encephalitis with extensive vascular changes and thrombosis.

Ripley(22) made neuropsychiatric observations on 51 patients with tsutsugamushi fever. All patients exhibited involvement of the central nervous system, manifestations ranging widely from transient toxic cerebral symptoms to evidence of severe, widespread inflammation resulting in coma and death. Pathologic changes in the central nervous system were similar to those found in other organs of the body.

Freeman(23) made pathologic studies of the cerebral motor cortex in 4 cases of amyotonia congenita. The precentral gyrus was characterized by almost complete absence of the large multipolar cells of Betz. This may prove to be an important point in differentiating this disease pathologically from infantile spinal muscular atrophy. Bowden and Gutman(24) found that biopsy of muscle with study of the pattern of innervation affords valuable aid to diagnosis in unusual cases of muscular atrophy and weakness. Billig and his co-workers(25) found that they could improve the power of muscles with residual paresis caused by poliomyelitis by the application of procedures calculated to cause axon branching of the motor fibers which have escaped destruction in order to innervate with the extra branches muscle fibers which lost their nerve supply. Bodian(26) found multinucleated neurons in the nervous system of an adolescent rhesus monkey which had been killed during the acute stage of poliomyelitis. Milhorat(27) reported 2 cases of progressive muscular atrophy with onset several years after an attack of acute epidemic encephalitis.

Gaskill and Korb(28) found that cutaneous diphtheria is frequently complicated by multiple neuritis. There is no relationship between the site of the cutaneous lesions

and the development of the symptoms. A Guillain-Barré type of albuminocytologic dissociation is a concomitant of this form of multiple neuritis. Perkins and Laufer(29) studied 21 cases of postdiphtheritic polyneuritis and found that it exhibits a characteristic clinical picture which differs from that seen in other neuritides.

Rudy and Epstein(30) reviewed 100 cases of diabetic neuropathy. They concluded that this is a generalized neurologic disturbance and is observed not only in the acute stage of diabetes but also soon after the control of the glycosuria and hyperglycemia and in the chronic and even mild cases of the disease. Symptoms and signs of vitamin B-complex deficiency are frequently associated with it. The vitamin deficiency is secondary and appears to be caused by the disturbed metabolism or an associated chronic infection. Avery(31) stated that porphyria should be suspected in all cases of severe ascending polyneuropathy and in all cases of stupor and coma of unexplained origin. Dunning(32) found that the prognosis was satisfactory without operation in 54 percent of the cases of sciatic neuritis caused, in the majority of instances, by herniation of the nucleus pulposus in the fourth or fifth lumbar intervertebral disk.

Kravitz and Stockfisch(33) state that Wernicke's disease was thought by early investigators to be due to alcohol. Later it was shown to be the result of a vitamin deficiency due to failure of absorption of vitamin from the intestines. It is more common in alcoholics because alcohol damages the liver as well as causing a chronic gastroenteritis which interferes with food absorption.

Oller(34) observed paroxysmal autonomic crises in a postencephalitic patient. The attacks consisted of the sudden appearance of extreme tachycardia, tachypnea, hyperthermia and diaphoresis, associated with emotional manifestation resembling "sham" rage and with pronounced muscular hypertonic phenomena. Davis and Bick(35) considered skin lesions of eczema and hyperhidrosis under conditions of wartime stress as part of a physiological manifestation of generalized anxiety. Blair and Keller(36) found that a dog's ability to prevent fall in rectal temperature when it was subjected to ordi-

nary cool environmental temperatures was completely eliminated by a procedure that severed the caudal connection of the entire hypothalamic gray matter. Evidence was encountered which indicated that at this hypothalamic level there are separate neural elements for the shivering and non-shivering thermogenic functions. Morrison and Spiegel(37) studied skin potential in cases of visceral pain. They found that an increase of skin potential of 10 m.v. or more in the dermatomes corresponding to an organ causing pain, supports the assumption of organic disease.

Reider and Player(38) studied 2 cases of hemiatrophy of the body which first made their clinical appearance in adult life. Pneumo-encephalogram revealed an enlargement of the opposite cerebral ventricle. Leavitt(39) examined a 21 year old man who manifested what appeared to be a congenital motor anomaly affecting the fingers of both hands whereby skilled motor acts performed with one hand were reflected by involuntary analogous activity of the other.

Fleischhacker(40) stated that under hypoglycemia, schizophrenics show reflex changes which usually appear on the left side first or are stronger on this side. Also slight motor signs are present on the left side in a considerable number of patients suffering from mental symptoms associated with arteriosclerosis, senility or mental deficiency. Post-mortem examinations showed that the right hemisphere is more often or more extensively damaged than the left. There apparently have been suggestions that disturbances of the right hemisphere of the brain would give rise to mental symptoms more often than processes damaging the other hemisphere.

Bell and Karnosh(41) pointed out that co-existing disturbances in skin sensation occur in approximately 76 percent of all hemiplegics and in most instances consist of blunting of all qualities of sensation. The flaccid forms of hemiplegia demonstrate sensory disturbances over the paralyzed areas at least twice as frequently as those which are of spastic type. The most pronounced hypotonia in hemiplegia is found in those patients in whom there is also detected homonymous hemianopia of the same side. The triad of hemiplegia, hemianesthesia and

hemianopia is attributed to a lesion of the anterior choroidal artery which also interrupts the tone regulating sensory-motor arcs of the basal ganglia, thereby producing a flaccid state in the paralyzed arm and leg. Kabat and Jones(42) treated patients with spastic paralysis with neostigmine. They found that this drug decreases the spasticity, relieving muscle pain and decreasing deformity. Schlesinger(43) reported that a suspension of curare in a mixture of peanut oil and white wax afforded good relaxation of muscle spasm up to 3 days' duration in a group of patients with injury of the spinal cord.

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ELECTROENCEPHALOGRAPHY

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In past years it has been customary to list in this section only those reports which have been published in full. However, this year an exception will be made in order to

draw attention to the work on post-traumatic epilepsy of Earl Walker and his group. This work was reported by Walker at the meeting of The American Psychiatric Association

in May, 1946(1). Post-traumatic epileptics are studied electroencephalographically to determine whether or not they show a seizure focus. If none is present small amounts of metrazol are injected intravenously; experience indicates that in many cases a focus can be made to appear by this means. The decisions to operate and where to operate are based on the electroencephalographic findings. At operation electrodes are placed on the exposed cortex and these are used both for electrical stimulation of the brain and for recording the response after stimulation. No effort is made to produce a convulsion, but only an abnormal discharge. An abnormally discharging area is regarded as a seizure focus and ablated, thus the final decision to excise a particular cortical area is based upon the electroencephalographic findings. Penfield, working with Jasper in Montreal, has used the electroencephalograph as a guide to operation in epilepsy, but he has not stated as complete a reliance on electroencephalography as have Walker and his collaborators.

The second major development of the past year is the demonstration of the almost specific effect of tridione on the 3-per-second wave-and-spike type of petit mal epilepsy(2, 3); it rarely has any effect against grand mal or psychomotor seizures(4, 5). Since the clinical diagnosis of the 3-per-second wave-and-spike type of petit mal is uncertain, the electroencephalograph has thus become an important practical guide to therapy.

The medical-legal implications of electroencephalography have been considered in detail in the past year(6). Two interesting papers have been published by Greenblatt and collaborators. The first of these(7) shows that the EEG is helpful in the differentiation of true syncope from "fainting spells" which have an epileptic basis; the incidence of electroencephalographic abnormality in patients with syncope was found to be no higher than in a control series. Another study(8) was conducted on a group of diabetic patients with a history of frequent insulin reactions or seizures in which hypoglycemia was considered a possible precipitating factor. It was found that as a group these patients had a much higher incidence of electroencephalographic abnormality than patients with uncomplicated diabetes. It is

concluded that diabetic patients with frequent insulin reactions or seizures have, in addition to their diabetes, a defective regulation of the cortical activity. The authors do not consider the possibility that the slow waves and other abnormalities which appear in patients with a history of reactions and seizures are secondary manifestations of repeated exposure to extremely low sugar levels.

Margaret Lennox(9) has provided good experimental proof that sedative drugs in the doses commonly employed in psychotic patients alter the EEG for as much as 12 hours. Sodium amytal produced more electroencephalographic abnormality than phenobarbital or nembutal; chloral and paraldehyde produced the least abnormality.

Baudoin and Fischgold have brought French electroencephalography up to date by a series of articles published in one issue of *La Semaine des Hopitaux*, and in this same issue the report of Ajuriaguerra and Fischgold(10) on electroencephalographic changes in carbon monoxide poisoning constitutes an important original contribution. The authors find that during the acute phase and shortly thereafter the EEG is abnormal, but tends to improve with time; mild cases clear up in a few days and severe cases take longer or may show persistent abnormalities. However, though clinical residuals may remain or increase, the EEG tends to improve with time, and even in the presence of amnesia, disorientation and confusion the EEG may be normal.

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EPILEPSY

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Epilepsy in relation to electroencephalography is dealt with in the contribution of Dr. Gibbs. The remainder of the harvest of articles this year is below average in numbers, presumably an aftermath of the war and of the curtailment of the program of the section of convulsive disorders of The American Psychiatric Association. Publication of the 44 articles given before the joint scientific sessions of the Association for Research in Nervous and Mental Diseases and the International League Against Epilepsy on December 13th and 14th of 1946 will make next year's report more fruitful. The reader is also referred to the current number of *Epilepsia*, which abstracts the world's literature on the subject.

During the war, America was denied access to foreign books and articles. Two monographs have been received recently. One is on the etiology, symptomatology and treatment of epilepsy in children by Ledebøer(1), a leader of Dutch epileptologists. The other by Moruzzi(2) and printed in Bologna is a detailed review and report of the neurophysiology of convulsions as revealed by electrical and mechanical recordings of nerve currents and of muscle move-

ments in animals. Some 400 articles are referred to. In this country, 1946 produced a new edition of the popular book on epilepsy—"Science and Seizures(3)."

Probably the most substantial contributions have been in the field of therapy. Buchanan(4) gives a commonsense statement of standard treatment in children. Lennox(5, 6) outlines newer aspects of therapy, especially results with the two drugs which are as yet in the experimental stage, methylphenylethyl hydantoin (mesantoin) and trimethyloxazolidine dione (tridion). As regards the former, Kozol(7) has given a more enthusiastic report. Sixty percent of his 106 patients had a 90 percent reduction in seizures. The frequency of rash and of drowsiness limits the usefulness of this drug. However, the absence of ataxia and of hypertrophy of the gums makes it a useful substitute or adjunct of diphenylhydantoin (dilantin) in the treatment of convulsive or psychomotor seizures. It is not effective for petit mal. Other hydantoinates are being scrutinized in experimental laboratories(8).

Trimethyloxazolidine dione, mentioned in the review of last year, has kept its early promises(9). Perlstein and Andelman(10)

believe it has gone beyond these and helps not only the petit mal triad of seizures but also many patients with grand mal or with the spasticity of cerebral palsy or the spasm of tetanus. DeJong(11, 12) finds that the drug, when combined with phenobarbital or with diphenylhydantoin, is often effective in the control of psychomotor seizures. However, reviewing his experience in 219 cases, Lennox(13) reports almost uniform success in the treatment of petit mal, occasional success with combined dilantin and tridione in psychomotor epilepsy, and almost uniform failure in grand mal. The photophobia caused by the drug has not been explained. Toxic action on the blood forming elements of the bone marrow must be watched for, since depression of the neutrophils(14) and two deaths from aplastic anemia have been reported(15, 16).

Animal studies form a background for the evaluation of drugs which may prove clinically useful. Merritt and Putnam(17) have made public the results of their extensive investigation of the anticonvulsant properties of some 400 chemicals. Seventy-six of these were given a four plus rating. The authors record the effective and the minimal lethal doses and specify twelve compounds that have proved to be toxic. Under grant from the Public Health Service, Toman, Swinyard and Goodman(18) have studied the effects of maximal electro-shock. Convulsions were produced by electro-shock or by metrazol injections. The benefit from anticonvulsant drugs was more clearly demonstrable for these maximal convulsions than for smaller seizure manifestations. The authors rank tridione with phenobarbital in protective value(19) whereas glutamic acid fails to protect in any dose(20). Cellular hydration(21, 22) by electrolyte depletion, and by the oral administration of water reduces the seizure threshold in rats by more than 50 percent, although the pattern of maximal electro-shock convulsions is not altered. Dilantin, phenobarbital and tridione all raise a convulsive threshold which has been lowered by cellular hydration, but do not affect the convulsive threshold of the animal(23). According to Marks and Spiegel(24) intramuscular and intraperitoneal injections of pregnenolone in dogs and cats raise

the threshold for electrically induced convulsions. In some animals an increase in threshold could be observed after a single injection.

In the future much will be written about epilepsy produced by the wounds of battle. The best surgical judgment and technique must be mobilized for these cases. Walker(25) has been aided in the localization of epileptogenic foci by induced subclinical cortical seizure discharges. He used intravenous injection of subconvulsive doses of metrazol, followed, if this proved of localizing value, by direct stimulation of the cortex with a minimal electrical current.

Investigations into the background etiology of epilepsy have been relatively neglected. Statistical and electroencephalographic studies of the influence of heredity have been reported in two contributions from Boston(26, 27). Data deal with 12,119 near relatives of 2,130 epileptics, 50 twin pairs affected by seizures, together with analyses of the electroencephalograms of 470 relatives and of the 50 twins. They suggest that not epilepsy per se, but a tendency or predisposition is inherited, and the electroencephalographic pattern is an hereditary trait; however, practical limitations in recording minor changes in the EEG limit the application of negative results. The incidence of epilepsy is higher among the relatives of the following: female epileptics; those with petit mal or whose seizures antedated any pathology of the brain; those in whom it developed early in life, and in whom mental abnormalities were present at birth. Follow-up studies of 691 children of the epilepsy clinic at the Johns Hopkins Hospital(28) reveal an average recovery rate of 35.7 percent. The rate is 41.5 percent in so-called idiopathic epilepsy as compared with 20.8 percent in organic epilepsy. (Recovery is defined as freedom from seizures for a period of at least two years.) A heavy family history of epilepsy, but not of febrile convulsions, is prognostically unfavorable. In addition to these scientific studies, steady progress is being made in the instruction of doctors(29), and nurses(30) and in the education of the general public by the American Epilepsy League. This lay organization also helps the doctors through assumption of financial responsibility for the magazine *Epilepsia*.

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NEUROSYPHILIS

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The literature on neurosyphilis in 1946 was again dominated by the subject of penicillin therapy. Another year not only added more cases to the investigative studies but also, by virtue of the time elapsed, added validity to treatment results. All observers are in agreement as to the effect of penicillin on the spinal fluid abnormalities but a healthy, stimulating difference of opinion apparently exists concerning the need for fever therapy. There were also several papers during the

year, not dealing with penicillin, which deserve comment.

Many of those interested in the historical aspects of fever therapy will recall their disturbed feelings on reading the publication of Zakon and Neymann(1) in 1943, and subsequently, the editorial in the *Journal of the American Medical Association* of April 8, 1944, in which it was stated that priority for the use of malaria and relapsing fever in the treatment of general paralysis should

belong to Rosenblum. Although the importance of Dr. Julius Wagner-Jauregg's work was in no-wise belittled by these publications, it is consoling to the admirers of Wagner-Jauregg to have his version of this subject put into print. "The History of the Malaria Treatment of General Paralysis" by Wagner-Jauregg, translated from the German by Bruetsch(2), recognized Rosenblum but points out that he did not follow up by further investigation his observations that some psychoses recover with fever.

The perplexing problems of pathogenesis and treatment of primary optic atrophy were discussed by Bruetsch(3). From a pathological study of 70 cases of neurosyphilis, 12 of which had optic atrophy, the author concludes that the optic nerves and chiasm are invaded from without and that these structures show evidences of inflammation comparable to that obtained in general paresis—although no spirochetes were found in the tissues. Malaria is recommended in view of the apparent arrest of the pathological process in cases which received that therapy. This paper, although not well documented by case reports and detailed description of pathological material, is stimulating and provocative. Attention should be drawn to the discussions which followed the presentation of the paper before the section on nervous and mental diseases of the American Medical Association. The concepts of pathogenesis of optic atrophy and of tabes as held by a number of persons in the field of syphilology are recorded.

Syphilitic amyotrophy is discussed by Revilla(4) in a clinical study of 7 cases. In these, as in the majority of cases falling into this category, proof that the amyotrophy is of syphilitic origin is conjectural, although one of his cases showed objective improvement after 2 months of antisyphilitic treatment (metal chemo-therapy). It is noteworthy that O'Leary(5) obtained no interruption in the progression of symptoms and signs of 2 patients with syphilitic amyotrophy treated with 12,000,000 and 16,000,000 units of penicillin respectively.

Two interesting and instructive cases of syphilitic arachnoiditis treated by penicillin were reported by Callaway and his co-workers(6). The first case was operated upon and thickened spinal arachnoid was

removed for pathological examination. Symptomatic improvement followed surgery and penicillin therapy, although spinal fluid relapse subsequently necessitated fever therapy and a repeat course of penicillin. The second case showed a neurological picture of upper thoracic spinal cord compression with partial subarachnoid block. Gradual disappearance of neurological signs followed treatment with penicillin. Since surgical exploration was not necessary in the second case, a differential diagnosis between arachnoiditis and pachymeningitis was not established but there is no doubt of the syphilitic etiology in either case.

Following early investigations which demonstrated that penicillin did not enter the spinal fluid in any appreciable amount, interest was stirred into the possibility of intrathecal injection of the drug for the treatment of neurosyphilis. Publications in 1945, however, presented clinical and experimental data to show that large intrathecal doses carried the potential danger of convulsions and possibly of death. Furthermore, sufficient data have accumulated to show that intrathecal penicillin is not necessary for satisfactory results in all types of neurosyphilis. It is, nevertheless, of considerable interest that Weickhardt(7) treated 5 cases of general paresis with intrathecal penicillin alone. Small initial doses were gradually increased to a maximum of 100,000 units. A febrile response followed the initial dose in 4 of the 5 cases, but no other untoward effects occurred. One case died on the 8th treatment day from suffocation by food in the trachea and autopsy showed no pathological change which could be attributed to the intrathecal penicillin. The remaining 4 patients had maintained both clinical and spinal fluid improvement at the end of 1 year following treatment.

Callaway and others(8) reported the results of treatment in their first 100 cases which were followed for 6 to 18 months after 4,000,000 units of penicillin alone. These cases were all considered "active" neurosyphilis and were classified as follows: asymptomatic 37, paresis 39, tabes dorsalis 11, taboparesis 7, meningovascular 6. Ninety-one cases showed "good" or "excellent" results by combined clinical and serological criteria. Only 5 cases showed poor results.

Stated differently, "60% have shown clinical improvement associated with definite improvement in spinal fluid findings, 31% clinical improvement alone, 4% improvement in spinal fluid findings unassociated with clinical change, and 5% have shown decided clinical deterioration with no improvement or progression in their spinal fluid findings."

O'Leary and co-workers(9) reported the treatment with penicillin of 100 patients with different types of neurosyphilis, in various schedules and doses and also in combination with fever therapy. They emphasized that the most outstanding result common to most patients is found in the spinal fluid, which showed a return of cell count, total protein and gold curve to within normal limits and a reduction of strength of the complement fixation test. The outstanding clinical efforts were a gain in weight and a reduction of severity and frequency of pains in the legs. They state further that patients who had meningeal neurosyphilis were most responsive both clinically and serologically, while patients who had parenchymatous forms of the disease were helped only slightly, if at all. O'Leary and Kierland(5) in a review of "Today's Treatment of Syphilis" read in the general scientific meetings at the 95th annual session of the American Medical Association, San Francisco, July 2, 1946, restated the above results and pointed out that "more clinical remissions were obtained in parietic patients who received combined penicillin-fever treatment than when penicillin was given alone. In fact, we have not observed a frank clinical remission in a parietic patient after administration of penicillin alone, although such remissions have been observed by others."

The active and thorough investigations into the effects of penicillin in neurosyphilis at the University of Pennsylvania were reported by Stokes and others(10) whose results with penicillin alone are considered more favorable. Two hundred and eighty-three patients, followed from 120 to 719 days, were studied. They showed a spectacular return of the spinal fluid findings toward normal in a high percentage of cases of all types of the disease. Clinically, symptomatic neurosyphilis showed an overall improvement in 65%. However, they observed a difference in the results of the different

types of the disease for "30% of these with dementia paralytica improved definitely, 31% of the tabetic, 17% of the meningo-vascular patients." But, Stokes believes "Penicillin is outranked by malaria as yet in clinical improvement, probably because of the short observation period of penicillin."

Reynolds, Mohr and Moore(11), reporting results in dementia paralytica from Johns Hopkins, make a comparison between 24 cases treated with penicillin alone and 17 cases treated with penicillin combined with malaria. They conclude that penicillin alone "produced at least some degree of clinical improvement in 11 of 24 patients (46%). Improvement in spinal fluid abnormalities generally was apparent. Penicillin administered concurrently with malarial therapy resulted in clinical improvement in at least 10 of 17 patients (58%). Improvement in spinal fluid abnormalities was even more complete than with penicillin alone."

The results obtained in 100 cases followed 1 year or more at the Boston Psychopathic Hospital(12) were presented before the section on dermatology and syphilology of the American Medical Association in July at San Francisco. All but 19 of these cases received fever therapy in addition to penicillin, the amount of fever being limited to 4 to 6 paroxysms of malaria or 20 hours of fever above 105° F. in the fever cabinet. The course of 3,000,000 units of penicillin was repeated if indicated by clinical and/or serological data. Sixty-two cases were improved, 35 showed no definite clinical change and 5 were worse. Thirty-six of the 100 cases required a second or third course of penicillin. The group studied included 75 cases of dementia paralytica which showed 52 (69%) improved, 21 no change and 2 worse. Those treated with combination of penicillin and malaria showed a somewhat higher percentage of improved cases than those treated with fever cabinet or with penicillin alone.

The results of penicillin treatment of asymptomatic neurosyphilis is tabulated and discussed by Moore and Mohr(13), O'Leary and Kierland(5), Callaway *et al.*(8), and Stokes *et al.*(10). There is a remarkable agreement among these authors that penicillin in doses of 2.4 million units or more exercises a favorable effect on the spinal

fluid. Moore stresses that these cases require careful follow-up with frequent examinations of the spinal fluid and that retreatment should be instituted with first evidence of relapse. Cases of late asymptomatic neurosyphilis which do not show a good response to, or which relapse after one course of, penicillin may well need fever therapy in addition to retreatment with penicillin.

Callaway *et al.* (8) and Tucker and Robinson (14) raised the question of danger in administration of penicillin in large doses to patients with syphilitic aortitis, and suggest that in such cases penicillin is best given by starting the course with relatively small doses. This is undoubtedly good advice, yet it is very likely that only a rare case will encounter a severe complication due to therapeutic shock.

In summary it may be said that penicillin has proved to be the most effective single therapeutic agent thus far discovered for the treatment of neurosyphilis. It reaches its peak of effectiveness in early asymptomatic and in syphilitic meningitis, but its usefulness in all other forms of the disease is unquestionable. The most effective total dose, the best frequency of administration and the most effective individual dose have yet to be determined. However, the evidence now points to the following as optimum: a total dose of from 4 to 10 million units, a frequency of every 3 hours and individual doses of from 25 to 50 thousand units. Intramuscular injection in saline or aqueous solution appears to be settled as the most satisfactory mode of administration.

A difference of opinion remains as to the requirement of fever therapy in addition to penicillin for the parenchymal forms of neurosyphilis. It is difficult to formulate the reasons for this difference in opinion from the published data. It is possible that those who advocate the combination of fever and penicillin are dealing with the disease in a later, more advanced stage. However, since fever therapy has already withstood the test of time as a treatment method, the therapist

will best serve his individual patient by giving the combination of fever and penicillin until investigators in the field have solved the problem.

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ALCOHOL. GERIATRICS

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ALCOHOL

During the past year there have been further efforts to do something about the problem of alcoholism.

The "Yale Plan" of information centers, has received wide publicity, and appears to be operating successfully. Alcoholics Anonymous show increasing vigor and strength, and are making further constructive efforts to aid in the treatment of alcoholics. The experiment at Knickerbocker Hospital, New York City, in which a ward has been turned over to Alcoholics Anonymous and selected cases sent there for temporary hospital care, has worked out in a reasonably satisfactory manner. There has been much agitation to set up new governmental machinery for dealing with this problem. The "Connecticut Plan" under which 9% of the revenue obtained from the sale of alcoholic beverages, is administered by a commission which is set up to carry on treatment and research into the problem, has gotten away in excellent fashion. It is still too early to know what can be done by such a method. The literature continues to show wide interest, and considerable research on the subject.

Masserman(1) and his colleagues have presented certain evidence based on controlled studies of cats, to indicate that the use of alcohol will afford partial protection against disturbing and upsetting experiences which would otherwise precipitate a neurosis. He feels that alcohol does this by diminishing the acuity of sensory experiences, disorganizing receptual integrative response formations, and impairing the retention of such reaction patterns as are temporarily formed. He feels that a similar reaction will occur in human beings.

An interesting article on alcohol and creative work by Ann Roe(2), studies carefully the life history of some 20 living painters, who are universally recognized for their great achievements. In addition to the regular interviews and the discussion of the use of alcohol by each one of the 20, the Rorschach and Thematic Apperception Tests were given to all of them. The results cannot be easily summarized, but the conclusions are that there is great variation in the alcoholic habits

of the subjects, 5 being moderate drinkers, 9 steady social drinkers and 6 excessive drinkers. No abstainers could be found. "With one exception they have all found that alcohol is not a good stimulus to creative work, and they do not use it consciously for this purpose." The interesting discussion of the whole problem cannot be condensed for this review, and the reader is referred to the original article.

Jellinek(3), by means of an elaborate questionnaire, has studied the drinking habits of some 98 members of Alcoholics Anonymous. The article is of interest in showing a specific questionnaire used for such purposes, and in the attempt to find certain behavior in the development of drinking habits which will be of use in further studies both to determine when persons may be developing dangerous habits and to determine prognosis.

The use of caffeine and sodium benzoate intravenously is recommended by Adler(4) in the treatment of violent or comatose alcoholic patients. It is stated that comatose patients are aroused and excited patients sedated by the general stimulating effects of the drugs on the higher nerve centers.

Lolli(5) discusses the relationship of hang-over to the theory and treatment of alcohol addiction. He states "the hang-over represents a sudden fall from the pleasurable or at least painless non-reality of acute intoxication, into a new reality more threatening than that of the period preceding the bout." He considers alcohol addiction as a psychoneurotic symptom, and feels that during the period of hang-over the patient is particularly susceptible to psychotherapy. Proper psychological handling of hang-over should, therefore, be the entering wedge of psychotherapy. He concludes "attention has been focussed on the hang-over situation because its adequate handling is followed by permanent sobriety in a few cases, and by a definite improvement in the drinking pattern in many other cases."

Riley and Marden(6) by means of a questionnaire sent to every tenth doctor in New Jersey, sought to discover the attitude of the medical profession towards alcoholism. In

general they found that doctors regarded alcoholism as an illness, but that the alcoholic was "an especially difficult person to deal with." About one-half of the doctors were pessimistic as regards any permanent cure from treatment. In general the doctors favored some constructive program, and felt that the state should maintain facilities for alcoholics. They strongly favored public education and attempts to prevent alcoholism by such means.

The summer school of alcoholic studies at Yale University held its fourth annual session during the summer of 1946, with a total of 161 students from all parts of the country. Fifty-six of these students were clergymen; 34 were educators; 30 were welfare workers; 11 were employees of the alcoholic beverage industry; 9 belonged to medical and allied professions, and 7 were professional temperance workers, leaving 14 more classed as miscellaneous. More than 20 of the enrolled students were members of Alcoholics Anonymous.

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GERIATRICS

The most important development in the field of geriatrics is the appearance of two new magazines, indicating the increasing interest in this subject. The first of these is *Geriatrics* the official organ of the American Geriatrics Society. This magazine is a bi-monthly, and states that it is "devoted to research and clinical study of the diseases and processes of the aged and ageing." A number of articles of interest to psychiatrists

are included. For example, in the first issue the late Harold D. Palmer has an article entitled "Mental Disorders of Old Age," which summarizes the important material on the subject. Edwin J. Doty discusses the "Incidence and Treatment of Deliria Reactions in Later Life" emphasizing the frequency of deliria in later life and the importance of avoiding chemical sedation and restraint, which he regards as particularly likely to increase the incidence of undesirable reactions.

The second magazine is the *Journal of Gerontology* which is owned and controlled by the Gerontological Society, Inc. The journal is a quarterly magazine, and in addition publishes a non-technical supplement quarterly which is separately bound and sent to all subscribers. There are many excellent articles. As samples of articles recommended to psychiatrists are such as "Ageing in Nutritionally Deficient Persons" by Tom D. Spies and Harvey S. Collins; "Attitude Towards Ageing and Aged; primitive societies" by Leo. W. Simmons; "Preparation for Retirement" by Leon H. Moore, and many other titles which cannot be given for lack of space. Psychiatrists will find much of value in both of these journals.

The 5th edition (1946) of "The Care of the Aged" by Malford W. Thewlis has appeared, and it is interesting to note that the psychiatric material is included under the chapter headed "Neurology."

Another new book "Creative Old Age" by Clair De Gruchy, describes the principles and procedures employed by the late Dr. Lillian J. Martin, and the work of the San Francisco Old Age Counselling Center. A number of case histories are given indicating methods of treatment.

In the January 1946 issue of the *Journal of Mental Science* are three excellent articles. The first by Aubrey Lewis "Ageing and Senility, a major problem of psychiatry"; the second by Margaret Davies Unsenck, "The Psychological Aspects of Ageing and Senility," and an article by H. Goldschmidt, "Social Aspects of Ageing and Senility."

In spite of the large number of articles and general interest in this subject, there seems to be nothing new or radical that has been brought out during the past year. The

importance of diet has been emphasized by many, and there seems to be rather general agreement that close attention to diet with increase of the vitamin and mineral content is of value. The psychological factors have been emphasized, and there is recurring emphasis on the fact that many conditions attributed to old age are really the result of emotional attitudes which the individual develops as a result of the cultural pattern in this matter. The philosophy generally accepted is that old persons should be encour-

aged to keep up their interests and carry on useful activities even when it might seem that they were taking actual physical risks by so doing.

As has been pointed out time and again, many individuals overweight, with high blood pressure, go on living and enjoying life for years smoking, drinking and over-eating. Other individuals have their own lives made miserable by the fear of high blood pressure, and are unable to do anything constructive or to enjoy life.

CHILD PSYCHIATRY. MENTAL DEFICIENCY

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Two features stand out prominently in the development of child psychiatry during the year 1946:

One of these features, which was already in evidence in the preceding year, has gathered momentum and has become a force to be reckoned with. Many physicians, especially psychiatrists and pediatricians, returning from the armed services, have been profoundly impressed by the influence of early life experiences on the morale and behavior of individual soldiers and sailors. Most of the published analyses of psychiatric war casualties refer to childhood relationships of the patients as potent etiologic factors. This, more than anything else, has begun to do away with the artificially sustained cleavage between adult psychiatry and child psychiatry. More and more of the younger people have come to feel that training in child psychiatry is an indispensable part of a well-rounded psychiatric orientation. Many young pediatricians clamor for opportunities for the kind of instruction which will enable them to deal with the everyday problems of the everyday child. The time has come when more and better training facilities must be provided in order to satisfy this increasing demand.

The second feature is even more stimulating and challenging. The United States has unquestionably become a world training center for child psychiatry. Ever more people are coming to these shores, eager to observe and acquire the attitudes and knowl-

edge and to learn the methods which are more advanced than anywhere else on the globe. Representatives of the Latin American and European countries are sent here for this purpose by their governments or by the foundations, and some come on their own. The few existing training centers are swamped with applications. The creation of more facilities is an imperative need.

Meetings.—The Section on Psychopathology of Childhood met on the first day of the May meeting of The American Psychiatric Association. The country-wide railroad strike prevented some contributors from coming to Chicago and presenting their papers. There were discussions of irrelevant and metaphorical language in early infantile autism (Kanner) (1); dilantin treatment for problem children with abnormal electroencephalograms (Walker and Kirkpatrick), and late results noted in children presenting postencephalitic behavior (Lurie). In another section, Jensen emphasized the importance of emotional factors in the dysrhythmic disorders of children. Sherman told of his experimental determinations of the threshold of frustration of normal, neurotic and schizophrenic children by recording facial and gestural responses and simultaneous tracing of the encephalogram and photopolygraph.

Periodicals.—*The Nervous Child*, whose untiring editor has recently announced a new publication to be known as the *Journal of Child Psychiatry*, came out with three valu-

able symposia, one on the problem of anxiety and fear disturbances in young children, one on problems of coercion, and one in which varying viewpoints on child psychoanalysis are set forth; a fourth issue of this year will deal with psychosomatic problems of early childhood. These symposia, in which all shades of modern psychiatric thought are represented, not only serve as an open forum but also contain discussions of each topic on a high scientific level.

The *American Journal of Orthopsychiatry* offered a symposium on children's stuttering, with contributions from Despert (physical, social and psychiatric findings) (2), Kopp (Ozeretzky tests) (3), Carlson (response to Binet tests) (4), and Krugman (Rorschach study) (5); the investigation of 50 patients showed the presence of fundamental anxiety not secondary to the speech difficulty, a marked disturbance of the overall motor functioning, and a personality structure more intelligent but less productive and more stilted than that of the average child. Harle (6) contributed a paper on the interpretation and treatment of acute stuttering in a 3½-year-old child. Andriola (7) discussed a "truancy syndrome," characterized by severe rejection on the part of parents or teachers, marital discord of the parents, and feelings of inadequacy and worthlessness. Arlow and Kadis (8) showed how finger painting can be employed successfully in the psychotherapy of children. Allen (9), taking part in a panel on the training of psychiatrists, discussed training in child psychiatry with the wisdom for which he is well known; the reading of his article is highly recommended by this reviewer.

It is gratifying to know that any review of progress in child psychiatry has to look now for publications in pediatric as well as psychiatric journals. The *American Journal of Diseases of Children* had four articles helping pediatricians to orient themselves in the field; two are by Senn (10, 11), who has helped to carry a psychiatric orientation into pediatrics, one is by Bakwin (12), a pediatrician profoundly and actively interested in children's behavior problems, and one is by Alpert (13), who tried to present "criteria for the recognition of neuroses in children." In the *Journal of Pediatrics*, Sportsman (14) discussed the psychiatric implications of

stramonium poisoning; Aldrich and collaborators (15) continued the reports of their study of the crying of newly born babies, which was reduced 51.4% after changes in the nursing and floor routine, the addition, of more nurses, and individualization of the nursing care; Hewitt and Aldrich (16) described how they could remove anorexia in 91% of their followed-up cases by advising the mothers; Gesell (17) outlined practical rules in the care of premature infants; and Crothers and Meyer (18) offered suggestions about the handling of children hospitalized because of poliomyelitis, with the aim of avoiding psychiatric problems by helping the victims to make a good transition from immobilization to activity and from the hospital to home and school.

Books.—Toward the end of 1945, two books appeared in which attempts were made to present child psychiatry in the form of collections of representative articles by various authors. Unfortunately, editorial haste apparently did not even allow time for indexing. *Modern Trends in Child Psychiatry*, edited by Lewis and Pacella (19), is a collection of 17 articles (rather than chapters) in which as many experts summarize the topics of their particular interest. It is a somewhat selective Who's Who and Does What in Child Psychiatry. *The Psychoanalytic Study of the Child* (20), edited by the late Fenichel, is somewhat of a miscellany, in which some excellent original contributions are contained (also a few "surveys" and book reviews). Papers by Spitz on hospitalism, by Klein on the reluctance to go to school, and by Malcove on the work of Margaret Fries are especially worthy of note.

Mental Deficiency.—With each advancing year, the *American Journal of Mental Deficiency*, under the editorial leadership of Edward J. Humphreys, is assuming more and more the functions of a modern, broadly conceived and progressively oriented *vadé mecum*. A mere arrangement and condensation of the pivotal articles published in the past few years could easily furnish the material for a complete and up-to-date textbook. The three numbers brought out so far in 1946 cover competently topics pertaining to classification, phenomenology, education, the aspects of recreation, music and religion, administrative structures and procedures, in-

service training of employees, adjustment in the community, and critical appraisals of psychometric methods and results.

A few specific contributions may be mentioned: Wiener and Brody(21) suggested that Kernicterus in erythroblastosis fetalis results from the formation of agglutination thrombi in the cerebral vessels, with simultaneous liver damage. Gordon (22) emphasized the conclusion reached previously by Pototzky (whom he did not quote) that many Mongolians attain a higher intellectual level than was formerly assumed. Thorne and Andrews(23) found in a five-year-study of parental attitudes toward their institutionalized children that absence does not always make the heart grow fonder; only 22% of 291 children received occasional or regular visits and gifts from their families. Hackbusch and Klopfer(24) pleaded for a change of "what someone has called the 'snobbish attitude' of clinics, so that children will be considered 'treatable' and capable of being

helped on some other basis than just the I.Q."

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PSYCHOMETRICS

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Various war accessions to psychometric techniques have been alluded to in previous reports. During this year, accounts of them have become increasingly available through the several agencies of their origin. The most convenient source of these references is Psychological Abstracts. A well considered overall review of these developments is given by Hunt(11).

The chief procedural accession is Form II of the Wechsler-Bellevue series(17). This is an outgrowth of applications of the method to military needs. Editorially it marks a distinct advance over the previous form, and what is the usual structure of clinical procedures. Improvement of content is also apparent, but both are difficult of assessment without considerable experience in use. Nor can it be overemphasized that a technically inferior procedure in the hands of one who well understands it, will have greater clinical validity than a superior procedure that is ill understood.

Estes(4) discusses Rapaport's views of

subtest score discrepancies in the Wechsler-Bellevue, with particular reference to shifting of verbal and performance ratings between superior and inferior groups. A critical scrutiny is offered by Luchins(13) of what may be expected to happen when clinical intelligence tests are understood on a technician level, particularly with reference to equating scores with diagnostic categories.

Damrau(3) adds another to the experiences of improved intellectual functioning under conditions that reduce emotional stresses. Bromide or barbiturate sedation was found to improve performance in an intellectual test. (This reviewer has come across a similar practice of taking a mild sedative in preparation for public speaking.)

Hilkevitch(9) contributes to the continuing work on epileptic deterioration, a study of retests. The Stanford-Binet procedure was used in assessing amount of deterioration during institutional life. This was found quite variable, and as a whole not great. Much of it had taken place before institu-

tionalization, and is very difficult to separate from original defect. A frequency of early seizures would be an especially effective factor in deterioration.

The psychometric attack on the inductive reasoning process is continued by Welch and Long(18). A test-series of rather broad scope was given to a group of over a hundred patients averaging about four to a diagnostic category. Differential criteria did not emerge, and would perhaps not be expected in the circumstances, the main interest of the work being from the standpoint of developing techniques, and analysis of the generalizing process.

It has long been apparent that test-series for "memory," involving as they largely did, facility in the establishment of associative cues, would exhibit considerable relationship with tests of "intelligence." Eysenck and Halstead(5) give a rigidly quantitative demonstration of this, with the natural inference that the conventional memory test is of but limited validity as such. Much of the difficulty seems to lie with a loose formulation of the memory concept in present thinking.

A memory-for-designs test as described by Graham and Kendall(7) appears to avoid this objection with some success. As described, it is better at avoiding false positives than accomplishing pickup, and the absence of correlation with "intelligence" will bear further checking; but it typifies the approach to the problem that is needed.

After many years of desuetude, there may be a recrudescence of interest in word-association procedures. Welch, Diethelm and Long(19) report some ingeniously conceived experiments, using nonsense syllables as stimulus words, in which there was considerable difference in associative facility in favor of elated versus non-elated groups. A simulation of this increased facility could be achieved through dexedrine sulfate. Liberson and Prescott(12) report word association and EEG correlation in a group of psychoneuroses; showing relations of less effective association response to abnormal EEG patterns, as well as to less favorable clinical prognosis.

The marked usefulness of the Kent "emergency" questions invites the consideration of alternative procedures. Buck(2) offers a series based on time orientation, that has con-

siderable promise in this respect. The paper gives all data needed for giving and evaluating. While obviously narrower in scope, it is possibly more culture-free than the Kent procedure, and adapted to a wider age-range.

The Goodenough "draw-a-man" test has proved an attractive one in the comparison of cultural types and levels. Havighurst, Gunter and Pratt(8) review the literature concerning American Indians, and offer data of their own. The Indian performance seems to be better than that of whites; the test itself is doubtful for "general" intelligence, but available for a special type of concept formation. It seems as yet to have had little pathological use, but to be capable of effective combination with the Bender Gestalt figures. These it may be noted, have at last become available in a standard form, with specific instructions(1).

Studies of the Hunt-Minnesota test for organic brain damage are reported by Meehl and Jeffery(15), and by Malamud(14). The work of Meehl and Jeffery indicates that the presence of depression is likely to produce many "false positives" for this test. But the procedure may still have considerable value, when used in judicious combinations. Malamud reports findings of a more negative character, with altogether too many of these false positives for a presumably normal group. The possibility is suggested that a change of time standards might at least improve this situation.

The enduring dilemma of psychometric speed and accuracy is given a searching scrutiny by Himmelweit(10). Tasks with special reference to speed or accuracy were compared in their performance by hysterics and dysthymics. Statistically treated, it was felt that general factors for both speed and accuracy could be distinguished. There was in these data no relation between speed and accuracy unless the examinee's mistakes were evident to him, but in the latter case, a negative relationship, at least when the work is manipulative. The hysteric group seemed to run to speed, the dysthymic one, to accuracy.

Insofar as the psychiatrist concerns himself with the rôle of psychometrics in career planning, the recent developments under the leadership of Rogers(16), in non-directive counseling will be of interest. One may look forward to an increased role of motivation

in such guidance, as compared with the role of measurable aptitudes. Rogers' paper repays a careful reading, the conclusion in which it issues being that "Only when (1) the need to take tests is a significant aspect of the client's symptomatic behavior, or (2) it is impossible for the client to be responsible for a choice or (3) research purposes require a measurement of an admittedly changing characteristic, do psychometric tests seem to have a purpose with which the non-directive counselor can agree."

Counseling may be client-centered, but life in organized society is far from it. To the second of the conditions above named by Rogers, belong therefore all selectional procedures, including the broader bearings of military psychometrics as discussed by Bingham (1a). The paper is concerned essentially with the general classification test results. Among the more important observations are those concerned with its value as a predictor over a wide range of occupational skills, but the essential bearing of the paper is social, with reference to the maldistribution of education in relation to fitness.

Another contribution which is important to the psychiatrist interested in fundamental concepts, is made by Garrett (6). The main demonstration is that such broad "ability clusters" as the verbal, numerical and spatial, show a notable decrease of intercorrelation during the early growth-years. Save for these early years, the implications are heavily in favor of fractionated test series of the Bellevue, or Detroit learning aptitude type, though no doubt their subtests could be strengthened; as they are in the Thurstone primary abilities series for example.

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GENERAL CLINICAL PSYCHIATRY, PSYCHOSOMATIC MEDICINE AND PSYCHOSURGERY

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It has been our object in this review to collect a few of the most important contributions appearing through the year, for the purpose of directing attention to those features lending themselves either to practical application in the clinic or to additional investigatory procedures rather than to those of chiefly theoretical interest. No claims can be made to completeness as we have had to be both rigidly selective and brief in presenting the material taken from a considerable wealth of published work. More literature is now coming in from foreign countries, and there is some indication that the free exchange of journals and books that once promoted knowledge will be re-established soon on its original basis, thus stimulating and promoting research throughout the civilized world.

In clinical psychiatry Masserman's(1) book dealing with the principles of dynamic psychiatry marks a milestone in the integration of experimental psychology with the concepts of modern psychiatry. His approach is broadly eclectic as he attempts to bring together the Pavlovian, the Gestalt, and the psychoanalytic procedures to a common ground. He has emphasized a comprehensive point of view of total behavior, based upon biological observation and rooted in biological principles. It is enhanced by a wealth of clinical and experimental data. Behavior is not merely a mechanical response to various stimuli but is also dependent upon a total personality organization.

Seltzer(2) analyzed the body proportions of 258 normal young men. Stature, body weight, shoulder and chest measurements, hips, legs, hands, faces and heads were considered in relation to each other and in terms of various combinations. Certain disproportions were emphasized and correlated with dominant personality traits indicating disorders and quantitative differences in stability, integration, sensitivity and complexities in the personality—"individuals with traits indicating 'soundness,' stability, integration, vitality and strength of personality have fewer disproportions in their physiques

than the average of the group." Disproportions are probably constitutional in the sense that there is a "genetic element in the determination of personality and behavior." The author states that further study is necessary to determine the validity of the genetic component concept.

Felix Post(3), of Edinburgh, in an evaluation of the factors involved in 100 coal miners with mental illnesses, found that serious personality problems were of far greater importance in the etiology of the conditions than were occupational factors. These patients represented a fairly wide range of types of mental disorder. It is of some interest to note that the special stress associated with underground labor seemed to rank higher as a precipitating feature in the hysterical and anxiety depression cases than among the other types. The rôle played by the work of the miner in his mental attitudes and troubles is well presented.

Two attempts to predict the length of hospitalization of schizophrenic and manic-depressive patients on their first admission was reported by Dunham and Meltzer(4). Six hundred and eighty-nine cases were evaluated on the basis of data comprising 30 factors to which predictive weights were assigned. The other attempt was based on the assignment of predictive weights to 3 factors utilizing the same cases. These factors, namely duration of psychosis before hospitalization, mental status and insight into the condition, have some bearing on the length of the period of hospitalization necessary. Schneck(5) has offered a working scheme to evaluate an anxiety reaction. The nature and extent of external stresses affecting the individual in terms of producing anxiety are evaluated as to their subjective and objective significance. Evidence of predisposing factors in cases where there is very little external stress is brought prominently into the discussion. Anxiety reactions attain dynamic significance if they are divided and studied as "primary" and "secondary" in significance. These designations have been found useful in practice. Spiegel and

Oberndorf(6) point out that the causes of narcolepsy remain obscure, but are usually ascribed to some type of organic brain disease. They present a case of these uncontrollable attacks of sleep for the purpose of showing unusual psychogenic factors. Mental catharsis by means of disclosing memories, both forgotten and suppressed, seems to have been effective in removing the principal symptom. Psychogenic narcolepsy appears to be a means of unconsciously satisfying forbidden wishes without a feeling of guilt. A conscious sense of guilt made its appearance when the narcolepsy was removed.

A study to determine to what extent the choice of perversion is influenced by the characteristic of the ego was carried out by Bychowski(7). Apparently the type of perversion is not determined entirely by libidinal difficulties. Persistence of unaltered infantile attitudes is a pronounced feature of the ego of homosexuals. This feature is easily evoked and the patient utilizes freely his old ego. Clinical observations are presented in detail.

There has been a sustained activity in the field of "psychosomatics" which has become popular as a research focus. That mental illnesses may be modified favorably by physical disorders constitutes the subject of a study of Clow and Prout(8). Definitely improved mental states of various kinds were preceded by several types of physical disorders including major surgical procedures, acute infections, accidental injuries, and suicidal attempts. In nearly a third of the cases the improvement was sufficiently permanent to allow discharge from the hospital, and in many of these the favorable state continued. A number of particular features which seem to have some bearing on the results are discussed.

Bennett(9) in his detailed analysis of 150 patients who finally came for psychiatric treatment, revealed that they had been diagnosed and treated for an astonishingly large number and variety of organic diseases, most of which did not exist. The histories of these patients as a group revealed 496 medical treatments, 244 surgical procedures, and 71 miscellaneous therapeutic attempts. Most of these patients were suffering from in-

volitional melancholia or psychoneurotic ailments. After proper psychiatric therapy was instituted the percentage of complete and social recoveries was excellent.

The relation of the total circulatory function to the life situation of the individual is pointed out by Wolf and Wolff(10) who analyzed symptoms referable to the cardiovascular and respiratory systems in persons with and without heart disease. Daily observations were made in an effort to evaluate such symptoms as dyspnea, palpitation, cardiac pain, dizziness, faintness and fatigue. Personality organization and various stresses of daily life are brought into the foreground as etiological and modifying factors in cardiovascular complaints.

Decourt(11) describes a series of 13 cases of a syndrome characterized by amenorrhea, anorexia and rapidly developing cachexia in young women between the ages of 15 and 32. In 12 of the patients recovery was effected by psychotherapy. They were apparently rather typical anorexia nervosa reactions. The differential diagnosis from Simmond's disease is discussed in some detail.

Nicholson(12) studied the effect of psychotherapy without the use of special diets in the treatment of 38 obese persons; comparing these with groups of similar age and sex distribution managed by other methods. As success was obtained in a higher percentage of the cases treated with psychotherapy (26 successes, 12 failures) than by any of the methods used in the control groups, it seems probable that emotional factors play a dominant rôle. The psychological findings in the case histories and personality studies support this assumption. In 35 diet controlled cases treated without psychotherapy there were only 9 successes.

Squier and Dunbar(13) present material dealing with spontaneous abortion, premature delivery, still birth and normal full term pregnancies. Their case studies bring a number of emotional factors into the foreground emphasizing the particular features that should be taken into consideration by the obstetrician. The contribution opens up a field of importance that "may be called *psychosomatic obstetrics*" which promises much of practical value for the future. Dys-

menorrhea, dyspareunia, frigidity, some of the aspects of toxemia of pregnancy, lactation and various features of labor and the puerperium are also among the psychosomatic problems confronting the gynecologist and obstetrician.

A psychosomatic study of enuresis was made by Stalker and Band(14) from the University of Edinburgh. A conclusion that persistent enuresis is not merely a symptom, but is a special disease was reached after the investigation of 67 cases of the disorder. As a syndrome it has emotional and physical components and involves the total personality. Psychiatric methods of treatment were not outstandingly successful.

Eighty-six unselected military patients suffering from psoriasis were examined psychiatrically by Wittkower(15). Sixty-nine of these were chronic cases and 17 were acute forms. Five personality types were found, as follows—compulsive, overaggressive, bisexual, phobic and hysterical. Considered as a group, it seemed that the emotional factors had played a definite rôle in the etiology in 29 cases, with the possibility that they had been active also in 20 additional ones. There was no uniformity noted in the emotional conflict. The social effect of the skin condition itself is emphasized.

Evidence collected from the study of 20 stuttering psychotic patients by Barbara(16) strongly emphasizes it as an expression of an abnormal mental trend appearing usually early in life. In half of the cases the speech defect was present before the 10th year of age. In most cases a tense, worrisome environment, a specific precipitating event, or history of other stutterers in the family were among the findings. In early childhood there are usually traumatic experiences, fright dreams, general emotional instability and enuresis. It is a complex situation which can be understood only through a psychosomatic attitude and study on the part of the physician.

It is apparent that activities in "psycho-surgery" are on the increase and it is rather interesting to note that Frank(17) after a study of 200 prefrontal lobotomy cases finds that it is indicated for patients whose psychosis was sudden in onset, was precipitated by some mental or physical cause, has plastic

symptoms, a cyclic tendency, and relative freedom from deterioration. Any psychiatrist not sympathetic with this method of treatment might ask what more could one wish as a foundation for a good prognosis regardless of therapy used. On the other hand it is said to be contraindicated for those patients whose symptoms as described have always suggested a poor prognosis since the early days of Kraepelin.

Halstead, Carmichael and Bucy(18), reviewing the results of prefrontal lobotomy as reported during the past 10 years, point out that the rates and degrees of improvement claimed have not established any set of criteria for either preoperative or post-operative clinical status. There is little evidence to show that any patient has been studied adequately. Therefore the authors have devised a test to measure objectively the biological intelligence in an attempt to determine what happens in this field when the frontal lobes are disturbed. This paper presents a number of valuable features.

Freeman and Watts(19) reported 311 patients observed during the past 9 years following prefrontal lobotomy. About half of the patients are usefully occupied, one-fourth remain at home, and the rest are dead or in the hospital. The most favorable results are obtained in the obsessive tension conditions, in hypochondriasis, in agitated depressions, and in fixed psychosomatic conditions. Schizophrenias do not react so favorably. For certain reasons it fails in the deteriorated cases. Refinements in the operative procedures are described. Emphasis is placed upon the social adjustments and ability to exist outside the institution in those who would tend to remain chronically ill.

Prefrontal leucotomy in the treatment of 2 cases of post-encephalitic conduct disorders was reported by Thorpe(20) of the Wadsley Mental Hospital, Sheffield. Although both patients were benefited by the operation, which relieved the impulsiveness and irritability, they were still irresponsible according to normal social standards. They are somewhat below the average for intelligence and further development of their personalities is not to be expected.

Neuropathologic problems after lobotomy were reviewed by Meyer and Beck(21).

One patient in whom prefrontal lobotomy was done was a mentally normal person suffering from a basal meningioma. It proved to be an interesting test case for complete severance of fiber tracts. Several cases showing various complications and results are discussed, and a number of features having a relation to the operative technique are presented.

Barretto(22) reported the use of a personally devised lobotome which serves three useful purposes, namely, of locating the reference marks, of severing the tract fibers and of depositing iodine oil in the transection area. He emphasizes the value of preoperative pneumoencephalography for the localization of the ventricles.

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PHYSIOLOGICAL TREATMENT OF PSYCHOSES

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The past year has seen some genuine advances in the techniques of electrotherapy, a revived interest in insulin treatment, a variety of clinical observations on the shock treatments with some impressive statistical compilations, and the beginnings of a good theory to explain how the treatments work. The new book on shock treatments by Kalinowsky and Hoch(1), in spite of minor errors

of detail or emphasis, probably represents the best single course of information on these treatments to date. Brain and Strauss(2) have a chapter on electric convulsive treatment in the last edition of their "Recent Advances in Neurology and Neuropsychiatry" and Spiegel's(3) "Progress in Neurology and Psychiatry" has a chapter on shock therapy by Bennett and Engle.

ELECTRICAL MANAGEMENT OF CONVULSIVE TREATMENT

Sixty-cycle alternating current is used almost universally in electro-shock treatment because the electric utility companies find this the most convenient kind of current to dispense in our cities. As soon as we begin to inquire what kind of current is best suited for treatment we find that the safest, surest, least damaging and most effective current is a unidirectional brief impulse (one third of a millisecond instead of the 10 to 16 milliseconds now used) administered at a rate of 100 to 200 per second at milliamperages substantially less than those now employed (4). Even with the 60-cycle alternating current, many of the apparatuses now in use give unreliable current control. Olsen and Dale(5) recommend a circuit incorporating a light bulb to insure adequate current control, and to obviate the necessity for split second timing they recommend a dosage of 200 milliamperes for about 10 seconds, after which a fit supervenes. Wilcox(6) proposes a technique in which a modified half-wave rectified 60-cycle current is applied for about a second. In this way, only one-fifth to one twenty-fifth of the usual milliamperage is required to induce a convulsion. In addition, this author finds that application of the positive electrode to the vertex, with the negative electrode in the usual left temporal position, markedly diminishes confusion and memory difficulties even when treatments are given daily.

SAFETY FACTOR OF CONVULSIVE TREATMENT

If further work confirms these developments, courses of treatment may be both intensified and shortened, or can be safely administered in resistant cases for long periods of time. Even in its present form the treatment appears to have a wide margin of safety. Many elderly patients up to the age of 82 have been treated, without mishap(7). Jacobs and Gilson(8) suggest the possibility of shorter and more intensive treatment and cite the example of a schizophrenic girl treated with 33 convulsions on 9 treatment days, with as many as 8 treatments in a day. There then followed several days of marked confusion and almost vegetative behavior after which she made an ex-

cellent adjustment which was then well maintained. Zeifert(9) proposes an intensive electro-shock regimen for the treatment of wildly excited cases, even when associated with fever, as a life-saving measure. Treatments are given frequently, at intervals of 8 to 12 hours, for the first few days, coupled with intravenous hypnotics in the intervals. In addition blood plasma, amigen and hourly tube feedings are employed to combat dehydration and protein depletion. He believes that feedings should total 7000 calories, with 200 grams of protein in a 24-hour period, with at least 5000 cc. of fluid ingested. Gordon and Zimble(10) have managed a number of very excited and troublesome chronic cases with intensive and frequent electro-shock treatments over a period of several years, some of them having already received several hundred treatments, with general clinical improvements at the expense of some amnesia. In a study of one case that improved clinically in the course of 243 shock treatments Perlson(11) found surprisingly little intellectual defect. Kerman(12) also advises maintenance treatments in patients who tend to relapse.

SUPPLEMENTARY MEDICATION IN ELECTRO-SHOCK TREATMENT

Rubenstein(13) continues to report good results with the preliminary intravenous injection of 2.5% pentothal sodium, injected at the rate of one c. c. per minute until sleep supervenes. Ten to twelve c. c. are usually required. After a lapse of a few minutes, as the patient begins to arouse, the usual convulsive dose is administered. The technique is useful to relieve anxiety, especially in fearful relapsed cases. To allay post-convulsive excitement Baumoll(14) recommends the slow intravenous administration of a small amount of sodium amytal immediately after the convulsion. Gottsfeld(15) successfully used curare in the convulsive treatment of cases complicated by a variety of orthopedic conditions, and Palmer(16) recommends its wider use; but the near-fatality reported by Beard and Harris(17) is a reminder that curare is dangerous and should be saved for special indications.

INSULIN TREATMENT

The end of the war has allowed a revival of interest in the relatively time-consuming use of insulin shock treatment. Gralnick(18) reports on a large series of nearly 300 cases, and concludes that insulin is still the treatment of choice for schizophrenia; though he notes that a substantial number of unsuccessful cases responded to a subsequent course of electro-shock treatment. Prognostically poor cases are associated with long periods of treatment, but it is wrong to conclude, as Gralnick seems to do, that the shorter the treatment is, the better the results. Hohm(19) confirms the value of small insulin doses (30 to 60 units, with three hours of hypoglycemia) in the treatment of a variety of cases with anxiety, depression and hypochondriasis. In the management of the most typical and dangerous complication of insulin treatment, irreversible coma, Kleinschmidt(20) recommends the use of adrenal cortical extract, in addition to the blood transfusion, saline and glucose already generally used.

INSULIN RESISTANCE

The curious phenomenon of insulin resistance noted in schizophrenics by Meduna and others is found by Freeman(21) to be a general tendency of a variety of mentally disturbed cases, not limited to schizophrenia. Some schizophrenics manifest an extraordinary resistance to insulin during treatment. Animal experiments of Goldberg and Jeffries(22) suggest that nicotinyltaurine may provide a relatively non-toxic synergist to reinforce the insulin effect in these cases. Insulin resistant diabetics also appear to have an anti-insulin factor present in their serum(23).

RESULTS AND VALUE OF THE SHOCK TREATMENTS

Although 10 years have elapsed since the introduction of shock treatments to this country, statistically reliable large scale reports upon which an evaluation can be based are far too few. Danziger(24) deserves much credit for establishing the best statistical base-line to date for evaluating therapeutic results. His analysis is based on the U. S. Bureau of the Census report on state hospital

populations in 1933. According to these figures, of every 100 cases of dementia præcox admitted to state hospitals it is likely that 44 cases will be discharged as recovered or improved within a 20-year period. The corresponding figure for the end of a 5-year period is 17. It should be noted that these cases represent a miscellaneous group of various periods of duration of illness at the time of admission. Though no exactly equivalent miscellaneous group can be compared, Danziger and Kindwall(25) computed that in cases of less than 6 months duration given adequate modern treatment, 70% may be expected to recover with electro-shock treatment and 85% with insulin treatment. The authors regard 25 electro-shock treatments or 50 insulin coma treatments as a desirable minimum in unresponsive cases. Their figures exclude cases with mere improvement. To quote their conclusion, "Allowing for possible differences in criteria of improvement, the difference between the control and the shock groups is remarkable. The odds against such a difference being due to chance are, by the Pearson Chi square test, more than a billion to one." In another report Danziger and Landahl(26) attempt an ingenious mathematical formulation of these statistical correlations.

Kino and Thorpe(27), Sands(28) and Reznikoff(29) respectively report three separate series of cases totalling over 1000 treated by electro-shock. The general consensus of results is familiar; the treatment is almost specific for depressions, manic cases are more resistant, results are good in early schizophrenia but longer periods of treatment are required. Norman and Shea(30) could secure only 7% remission in schizophrenic cases of over one year's duration. Geoghegan(31) presents a striking case of recurrent manic excitement successfully treated with electro-shock. Feldman, Susselman(32) *et al.* found it valuable in the treatment of 2 cases of hysteria involving tremors and amnesia. Taylor(33) successfully treated 19 epileptics with electro-shock, almost completely eliminating spontaneous seizures. Three convulsions in a week are administered at first and gradually decreased in successive weeks until a stable regimen of one treatment a week is maintained. If spontaneous convulsions recur the frequency of

treatment is increased. No sedation nor special diets are required.

Sands(28) treated 2 women in early pregnancy with electro-shock without impairment to the offspring. McConnell(34) had the same experience with 2 women treated with insulin coma. Two of Gralnick's(35) cases treated with electro-shock and sub-shock insulin suffered stillbirths. Pregnancy is no contraindication to treatment, but it carries certain dangers and requires cautious management of treatment.

ELECTRONARCOSIS AND PROLONGED NARCOSIS

Valuable and promising work with electro-narcosis is continuing(36). A 60-cycle alternating current is used with temple placement of the electrodes. The initial current is 160 to 200 milliamperes, reduced after 30 seconds to 60 to 75 milliamperes, where it is maintained for about 7 minutes, or until treatment is terminated. The condition of the patient during this period may be described as an uneasy sleep with temporary respiratory arrest, flushing and salivation, with some spasticity and forced grasping. In a series of 1400 treatments no dangerous complications were encountered. The results appear to be comparable to those with insulin, though the management of treatment at the present stage appears to be more difficult and dangerous.

Parfitt(37) makes a plea for the inclusion of prolonged barbiturate narcosis in the therapeutic armamentarium particularly for use in cases where insulin or electro-shock treatments have proven ineffective.

OTHER TREATMENTS

Several authors have suggested various treatment procedures of unproven value: tuberculin(38), estrone(39), methyl guanidine(40), and corpus luteum hormone(41). Dilantin(42) is said to be of value in allaying certain types of excitement. In a full discussion of the value of benzedrine in clinical psychiatry, Sereiskii(43), a Soviet author, reaches conclusions essentially similar to those reported in the American literature. He feels that it is of value wherever an asthenic state is present and believes it has

a selective action on diencephalic functions. Penicillin has proven to be useful in certain toxic infectious psychoses(44). For some valuable recent discussions on biochemical and dietary aspects of psychiatry, the reader is referred to the Proceedings of the Royal Society of Medicine(45, 46). Hardwick(47) offers case reports to support his conclusion that several different types of acute psychoses may be due to vitamin deficiencies, not necessarily dietary in origin.

THEORY OF SHOCK TREATMENT

The explanation that shock treatments effect cures by destroying brain tissue is much too simple. It has also been shown repeatedly that the massive discharge of neurons by electrical shock does not in itself lead to any ascertainable cellular damage(48). Moreover a considerable variety of procedure and accidents can produce ameliorative changes in psychoses; spontaneous improvement following intercurrent physical disorders is by no means uncommon. In a systematic study(49) it was found that general anesthesia and acute infectious illness are especially likely to provoke remissions, particularly in recent cases. On the basis of a series of animal experiments Gellhorn(50) suggests that the mechanism of the insulin coma effect lies in its tendency to restore inhibited conditioned reactions, possibly through a strengthening of hypothalamic discharges to the cortex. Wilcox(6), also using Pavlovian concepts, regards the essential feature of electro-shock treatment a facilitation of cortical processes to break through a general state of cortical inhibition. The presence of some such general state of altered tension is also suggested by a mathematical analysis of certain qualities of psychotic thinking(51). The chief of the psychiatric clinic of the Pavlov Institute in Leningrad(52) believes that the common factors in all of these treatments are the production of cortical depression or inhibition coupled with subcortical release or vegetative mobilization. On the basis of this theoretical picture various combinations of sleep and convulsive therapy are used at his clinic with good results. Are we entitled to hope that these neurophysiological concepts will provide the missing link or meeting ground for the various contending views that have

developed in our understanding and treatment of psychoses?

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FAMILY CARE AND OUT-PATIENT MENTAL CLINICS IN 1946

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FAMILY CARE

The year 1946 witnessed little progress in family care of mental patients. The reasons for this fact are found in the acute housing shortage and in the high cost of living. It has been exceedingly difficult for workers who have charge of placement of mental patients in families to find suitable

homes. The few homes found demanded high rates. To satisfy the families already caring for patients it was necessary to increase allowances to more than double the rate paid previous to the war.

At Newark State School Dr. Jacob Cohen made a survey of the work of the school in the family placement of school-age children.

The facts revealed by the survey confirmed reports previously made that family care was highly beneficial to most of the children and helpful to the families in which the children were placed.

In New York State in general the family-care system for both the mentally ill and mentally defective has held its own, but no material increase in 1946 is reported.

The State Department of Public Welfare in Illinois states that "It is with genuine disappointment that the family-care program is reported this year." During the year there were only 121 new and 47 renewed placements, as against 362 new and 51 renewed placements the previous year. It is noteworthy that of the 168 patients placed, 97 paid for their care by their own earnings and 29 others reimbursed the families from their own funds.

The Department of Mental Hygiene in California also reports a decline in family care. In September, 1946, the mental patients in families numbered 216 as compared to upwards of 400 previous to the war. In order to induce families to receive patients the rate has now been increased to \$45 per month per patient.

The Massachusetts Department of Mental Health likewise states that the family-care program "has very definitely gone backward in most of our hospitals."

There is a general feeling that for certain types of patients family care is to be preferred to institution care and it seems probable that when more normal conditions are established advances will be made by several states in the placement of patients in families.

OUT-PATIENT MENTAL CLINICS

Noteworthy advances in out-patient clinic work have been projected during the current year, but their full realization has not been achieved. The National Committee for Mental Hygiene issued, early in the summer, its comprehensive directory of mental clinics in the United States. The directory indicates that many of the clinics which were more or less inactive during the war will soon be functioning on a pre-war basis.

The Department of Mental Hygiene in New York State received from the last legislature an increase of \$120,000 in its

annual budget. A considerable proportion of this fund is to be used in expansion of its child guidance clinics. The program calls for the organization of three new child guidance clinic teams as a first step and four others will follow as soon as personnel therefor becomes available. Four clinic teams are already operating. Each team is made up of a psychiatrist, a psychologist, two social workers and a stenographer. The present teams work out from four cities and provide service for 110 cities and towns throughout the state. Under the new set-up it is proposed to hold 350 clinics monthly, as compared with 140 during the peak year of 1941.

The Illinois Department of Public Welfare reports that the increase in mental clinic attendance during the past year has been 37 percent. The year's attendance reached 11,967.

Father Noel Mailloux, professor of psychiatry at the University of Montreal, reported at the annual meeting of the American Association on Mental Deficiency, held in Montreal the first week in October, that arrangements had been made for the establishment of a new mental hygiene clinic to serve the French speaking people of Montreal.

The California Department of Mental Hygiene opened a new out-patient mental hygiene clinic in Los Angeles during the year. Authorized for this clinic are two psychiatrists, one psychologist, three psychiatric social workers and two clerks. The clinic will serve patients with mental disease, alcoholism, behavior problems and other mental disorders.

The Veterans Administration has established numerous mental hygiene clinics in various parts of the country to serve veterans suffering with mild mental disorders.

Very little psychiatric literature of note pertaining to out-patients was published during the year.

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PSYCHIATRIC NURSING

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Appreciable progress in psychiatric nursing may be noted during the year 1946. Mental hospitals in some areas are welcoming back nurses and attendants formerly in military service.

Some hospitals are benefiting by their participation in the student nurse cadet corps program. As former members of the corps complete their basic education they accept appointment to the nursing staff as graduate nurses.¹

Professional nursing organizations at national, regional and state levels indicate sustained interest in the existing need for improvement in the care of hospitalized mental patients and in the influence public health nurses may exert in promoting mental health. For example, under the auspices of the Nursing Information Bureau of the American Nurses Association,² studies have been made indicating the numerical need of graduate nurses in mental hospitals.

Also, the National Organization for Public Health Nursing organized a committee to determine the best method of providing consultative service in mental hygiene for public health nurses. The entire committee met in New York City and subcommittee groups have met where they could do so conveniently. The study is being continued.

The New England Nurses Association offered a mental hygiene institute in Boston, February 1946. The University of Kansas included a period devoted to psychiatric nursing in a refresher course offered veteran and civilian nurses in Kansas City, May 1946.

Maine, Kansas and West Virginia state nursing organizations included sessions and round table discussions on mental hygiene and psychiatric nursing at their annual meetings.

The Western State Psychiatric Institute and Clinic, University of Pittsburgh, on its program presented April 4 and 5 at the University of Pittsburgh, included a section on nursing.

New York, Ohio and New Jersey added nurses to their staffs of consultants to the Commissioner of Mental Hygiene or Welfare.

The U. S. Veterans Administration appointed a psychiatric nursing consultant to the nursing service.

Two nurses from public health hospitals completed a year of postgraduate study in June and have returned to their respective positions. They were succeeded in postgraduate work by two others. Two additional nurses have been selected from the Division of State Services for postgraduate study in psychiatric nursing. An increasing number of inquiries from nurses throughout the country concerning needs and opportunities in psychiatric nursing have been received.

On June 14 a course in psychiatric nursing for army nurses was inaugurated at Brooke Medical Center, Fort Sam Houston, Texas. Psychiatric nursing is to be made a part of the army nurse's basic education and it is to be hoped that, eventually, every nurse who serves with the Army will have the opportunity to take the course.³

On May 1, twenty navy nurses began a new postgraduate course in psychiatric nursing at the Pennsylvania Hospital, department of mental and nervous diseases, in Philadelphia.⁴

Enactment of the National Mental Health Act, approved July 3, 1946, will provide postgraduate education in psychiatry for qualified nurses. Educational institutions will

¹ New Jersey State Hospital in Trenton.

² Facts About Nursing, 1945, pp. 52 and 56.

³ The American Journal of Nurses, July 1946, p. 497.

⁴ Ibid.

be enabled to provide programs for nurses, social workers, psychologists and other professional personnel when enabling funds are made available.⁵

⁵ Address by Thomas Parran, M.D., Surgeon General, USPHS, at Biennial Nursing Convention

All hospitals and communities report serious shortage of qualified nurses for responsible administrative and teaching positions. Mental hospitals share in this deprivation.

of the National Organization for Public Health Nursing, Atlantic City, New Jersey, September 24, 1946.

PSYCHIATRIC SOCIAL WORK

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The year was characterized by marked activity both in terms of publications and the opening of responsible positions. The Veterans Administration has taken on very well qualified people in branch and regional offices and in specific institutions. Late in the year psychiatric social work consultants were appointed to the National Committee for Mental Hygiene and the U. S. Public Health Service, Ethel Ginsburg the former; Daniel O'Keefe the latter. The 12 schools of social work which give complete training in the psychiatric social work specialty report that the courses are crowded and many applicants had to be turned away.

There have been developments in many directions as reflected from publications during the year. A good number of articles have appeared on military psychiatric social work, some of which not only report the facts regarding this work in the military service, but also note the implications for future work in civilian agencies(1-7). This is particularly true of Beck's treatise on "Short Term Therapy in an Authoritative Setting"(8).

A few articles appeared also which deal with the value of social histories in military selection(9), the by-products in terms of better understanding of social work on the part of the lay public(10) and possible uses to which something like medical survey of the Selective Service System could be put under peace time conditions(11).

With demobilization came increased need for psychiatric social work as a service to veterans. The VA needed hundreds of workers to staff their hospitals and out-patient clinics. The Red Cross has continued to use large numbers transferring many from hospitals to the Home Service Division(12).

Others have played leading roles in the organization and staffing of some of the larger Veterans' Information and Service Centers(13). Some worked in special rehabilitation clinics and other community clinics serving veterans(14-16). Special adaptations were required in all these set-ups, but knowledge of military life, of the psychiatric casualties, of environmental tensions upon discharge and of the numerous regulations pertaining to veterans are essential.

A review of the year's literature reveals many areas of special interest and application. Psychiatric social work is obviously done with almost all groups of persons who have any kind of emotional or psychiatric disability. A mere glance at the titles indicate that work is being done with the mentally ill who have been hospitalized(17-20) adolescents(21), sex offenders(23), tuberculars(24, 25) with parents and children(22, 26-28) and in such special situations as community centers(29) and a teaching unit for medical students(30). Woodward's presentation before the Senate hearing on the National Mental Health Bill presents in summary form the various functions of psychiatric social work in a national mental health program(31).

The transition period from war to peace has been marked by critical evaluation in psychiatric social work as well as in psychiatry. Several articles have re-examined the function of psychiatric social work showing both its overlapping with psychiatry and more particularly its own special province (8, 15, 32, 33). Beck stresses the fact that in the military "it was necessary for both psychiatrist and case worker to give up the semantical juggling act of calling therapy 'case work therapy' when it is done by the

case worker and again 'psychotherapy' when it is done by the psychiatrist, when, as is the case in many situations, it is the same process. In military psychiatry the accent was taken from the occupational title of the therapist and placed on the skill of the therapist. The difference in therapeutic skills of individuals was recognized and the psychiatrists assigned the person best qualified to conduct therapy with each case in question" (8). Ross (15) and Rockmore (32) point out that the broad but specialized training and experience of the social worker distinguishes the social worker's function from that of the psychiatrist, although both do engage in therapy. The social worker's task, as Rockmore states, "presumes a thorough and applied knowledge of the nature and varieties of human behavior" and in the words of Ross, "case work consists of assisting the patient to come to terms with his illness or emotional upset and to utilize the relation with the case worker to mobilize what desire and capacity he has to do something about getting better." Further evidence that psychiatric social workers are critically evaluating their viewpoints and methods and the public's attitude toward them appears in articles by Hagen and Barnes which were presented at one of the AAPSW's programs at the National Conference of Social Work (34, 35). Other articles deal with transference and client resistance (36, 37).

During the year two full-sized volumes appeared which are of special interest to psychiatric social workers. Lowrey's, "Psychiatry for Social Workers" (38) is primarily a book on psychiatry, but points it up with special application to the field of social work. Witmer's "Psychiatric Interview with Children" (27) focusing on psychiatric rather than social work interviews, has much valuable information about the psychiatric social work done with the children and other members of the families. Psychotherapy, as reflected in this book, is not limited strictly to the medical profession inasmuch as two of the cases were contributed by clinical psychologists, one by a lay analyst and one by a doctor of education.

The literature of the year also reflects a growing interest among psychiatric social workers in the use of group techniques. Tropp (5) describes the military social

worker as a true leader; Greving (39) has applied the findings of military social work to the field of institutional care, and Vassar (40) describes group treatment in a convalescent clinic. Towles (42) stresses the contributions of social case work to the work of other professions and to the understanding of individuals and the relationships between people. One article that applies the findings of the field to the lay public is Woodward's article on "Basic Training" which appeared in *Parents' Magazine* (41).

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OCCUPATIONAL THERAPY

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The outstanding advance in the field of occupational therapy during the last few years has been its progressive integration with other physical therapy measures into departments of physical medicine. This has been important particularly in the rehabilitation program for returning veterans.

The Veterans' Administration has been very active in this development and has installed departments of physical medicine and rehabilitation in all neuropsychiatric units. This program suffers mainly from the difficulty of obtaining trained personnel for the work. Occupational therapy is an integral part of this program.

Similarly, in the various states, depart-

ments of vocational rehabilitation have been set up. In many of these, occupational therapy in the nature of vocational training has been included. A few years ago the Federal grants to aid these projects were made available to neuro-psychiatric patients. Formerly this assistance had been given only for the physically disabled.

Departments of physical medicine have also been added to some of the medical schools and well trained physicians have been procured to head them.

The mental hygiene features of this shift appear to be highly significant. The improvement of morale in people disabled either physically or mentally by fitting them for

some productive and self supporting work is obvious. The directly therapeutic aspects of occupational therapy remain the principal feature, but its adaptation to vocational training has been greatly enhanced and more emphasis is now laid on utilitarian activities which are not only therapeutic, but fit the handicapped and disabled for productive life.

Some attempts have been made to improve the prescription for occupational therapy as in the articles by Franciscus(14) and Hyatt(19). Applications specifically to the mentally ill are contained in the articles by Hewitt(18), Day(17) and Switzer(26). Applications to special problems occur in the articles by Hildenbrand(16) and Cowell(29).

A further interesting advance is the introduction of arts and crafts teaching films for use with neuropsychiatric patients. Katz(21) gives a useful description of their application. The instruction is apparently superior when films are used, and should be conservative of personnel and time.

Haas(34) has depicted a number of aids for the aging or the physically handicapped patient to assist in carrying occupational therapy to him. Some of these are ingenious and all may be quite useful. He stresses the need for emphasis upon the achievement, rather than upon the handicap.

Ross(24) gives plans for home work shops and believes that many post war homes will be so equipped. This would enable the patient to carry on occupational therapy after he has left the hospital and would also serve as a prophylactic outlet in the preservation of mental health.

Ruegnitz(36) and Crampton(37) give examples of the use of music in the recreational and rehabilitation programs. Ruegnitz emphasizes the quieting effect on disturbed patients and gives advice as to program planning. Crampton has considerable interest in the production of music and the beneficial effects that patients derive from such activity.

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PSYCHIATRY IN INDUSTRY

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The industrial health movement, since its inception in the nineteenth century, has pursued a remarkably bifurcated course, for long periods concentrating almost exclusively upon the prevention of specific somatic affections, at others seeking a more global approach to the problem of individual and collective efficiency. The latter orientation, logically the more rewarding, has nevertheless been the more nebulous and inconsistent, standing out with clarity only during times of extraordinary pressure—war for example—when the overall importance of the human factor in industrial accomplishment becomes self-evident.

The science of psychology was the first to show the possibilities of an inclusive approach to problems of industry. When, in 1913, Münsterberg published his "Psychology and Industrial Efficiency" (1), he was a pioneer in a new field, soon to be followed, however, by other workers in applied psychology, who made a series of important contributions relating to fatigue, to the use of tests and measurements in the selection and placement of workers, and to various factors, both psychological and material, affecting work efficiency.

The application of psychiatry to industry, with emphasis upon both the economic and mental hygiene implications, was first essayed in 1915 at the Cheney Silk Company. There it was discovered by the present reviewer, who was the first full-time psychiatrist in industry, that maladjustment in the emotional drives and attitudes of employees

toward the employment situation cost the company more in production than accidents and disease.

World War I gave a tremendous impetus to psychiatry, with a reorientation from the custodial to the therapeutic function, and with lessons from military psychiatry on the importance of individual adjustment and integration which were particularly germane to industrial problems. Yet because psychiatry was oversold in the post-war period and consequently fell into a certain disrepute, its progress in industry was not sustained despite the accomplishment of important ground work during the nineteen-twenties. In 1922, for example, the Metropolitan Life Insurance Company introduced a full psychiatric service within the medical set-up for dealing with problems of maladjustment and early tension in employees, with such satisfactory results that a number of changes in company policy were adopted. In 1924, the R. H. Macy Company also established a psychiatric department for dealing with problems of the nervous workers—20 to 25 percent of all employees according to present-day calculations—and Andersson's history-making book, "Psychiatry in Industry," (1929) showed how this department, with its staff of psychiatrists, psychologists and psychiatric social workers, successfully treated on the job one-half of the problem employees and developed procedures for discovering executive material, and for placement, guidance, selection and promotion of employees (2).

In subsequent years, prior to the second notable impetus provided by another war, progress in industrial psychiatry was slow and undramatic, with management turning more to technology and engineering to solve production problems than to students of human behavior. Some groups incorporated psychiatric technics in their safety procedures, but on the whole there were no startling advances. One important piece of research was done at the Hawthorne Plant of the Western Electric Company from 1929 to 1933 by the Committee on work in Industry of the National Research Council, furnishing additional data on the relation of job attitudes to productive output. It demonstrated moreover the value of interviewing and counselling as an outlet for employees' feelings and stressed the influence of social relationships inherent in the job situation upon productivity(3).

The impact of World War II, with its tremendous production demands, the shortage of labor, and a consequent use of hordes of individuals not usually considered employable in factory work—women, old people, the handicapped—enormously accentuated interest in the psychiatric approach. The problems of absenteeism, accidents, psychosomatic illness became more acutely significant, and the auditing of jobs in terms of personality requirements and vice versa was subjected to new analysis. The situation was further complicated by the return to civilian life of service dischargees, either for physical disability or on a neuropsychiatric basis. In this connection, the most important task was to clear up the wide misunderstanding which grew up during the war regarding the NP dischargee, by emphasizing the restricted implications of the diagnosis when made in the military set-up, and the fact that it carries no adverse significance for reemployability in civilian life. The investigation and report of the Sub-Committee on Psychiatry of the National Association of Manufacturers did much to place the question of rehabilitation in reasonable perspective(4).

The reconstruction period finds the province of psychiatry more clearly defined than has hitherto been the case. The main areas of reference are conceded to be teaching, clinical practice and research. All experience

indicates that sound psychiatric principles are inseparably interwoven with good personnel practices, and that most psychiatry in industry will be practiced through established medical staffs, personnel workers and foremen, with the psychiatrist usually employing his technical knowledge more indirectly, as consultant and teacher. Some of the larger companies have full-time psychiatrists and psychiatric departments. Others have part-time psychiatrists serving in an advisory capacity, while in others, the industrial physician, trained in psychiatric principles, applies these principles within the regular doctor-patient relationship. Whatever the set-up may be, it is recognized that the task of the psychiatrist is to fit the man to the job, a job in which he finds satisfaction and an outlet for self-expression. If the psychiatrist is to fulfill his function as a successful representative member of the producing team, he must direct the emotional drives of employees to the needs of the industry, keeping in mind the importance of mutual aims and goals on the part of management and labor.

The year 1946 was highlighted by problems of conversion to peace-time production, with the reintegration of returning veterans of all categories into an industrial ensemble beset by material shortages and labor difficulties, the latter serving to underline in a particularly apposite way the significance of group effort and social solidarity for good morale. Just as the year began an interesting report emanated from the Standard Oil Company on that company's efforts to maintain good-feeling in all employees in service throughout the war. This was accomplished by letters; reassurance, help to dependents, and a well-planned program of reassimilation for disabled and non-disabled alike. As a result, of 8,384 men who left the company for military service, 1,426 were already back on the jobs by mid-1945. Almost without exception they fitted smoothly into civilian routine. The industrial problem the veteran was supposed to bring back with him failed to materialize. The story was somewhat less encouraging, however, among newly hired veterans who were not formerly with the company(5).

Post-war progress in industrial health and

efficiency in England received a noteworthy impetus with the founding in 1944 of the Roffey Park Rehabilitation Centre in Horsham. Established by the National Council for the Rehabilitation of Industrial Workers, the center was planned as a "working model" rehabilitation center for the investigation and treatment of sub-health in industry. It was subsidized by various firms, employers and other interested sponsors, with partial maintenance derived from patients or local authorities. The center has been operating for two years, with reported excellent results, and in 1946 plans for a training and research department were launched(6). The presence of 1,000 industrial patients each year should provide unique opportunities for teaching on a practical basis. The information gained will be passed on to managerial staff, medical personnel and welfare workers of associated firms, by means of regular two-weekly courses to be held at Roffey Park.

The place of the handicapped in industry received special consideration in the literature of 1946. The experience has been that with proper placement, training and safety precautions, the productivity of the handicapped is equivalent to that of normal individuals and that the accident rate is less. It has been observed that while labor turnover for handicapped veterans returning to old jobs is very low, it is very high for those who have never worked here before(7). The risk entailed in the employment of workers with degenerative disabilities (heart disease, diabetes, epilepsy, etc.) has been found to be far greater than with those having static handicaps such as loss of limbs, partial vision, etc.(8). As far as epileptics are concerned, however, Bridges asserts that 75 percent of them have desirable mental and physical qualifications for job performance, provided they are properly placed(9). Communications on the rehabilitation of amputees and those blinded in the war consistently stress the importance of psychological and emotional factors in successful adjustment. In England, for example, Wittkower and Davenport obtained splendid results in their blinded patients with attention to personality defects, emotional maladjustment and placement. They advocate maintaining as far as possible the social and intellectual level of the

individual, so that work and interest are provided on a long-term basis(10).

From the unique new community at Oak Ridge, Tennessee, came several reports during the year which were of particular importance(11, 12, 13). This teeming, war-spawned town of 75,000 people had all the problems of the ordinary city, plus many special ones incident to the transplanting of thousands of people, inadequate housing and allied difficulties, an atmosphere of danger and secrecy, and other unusual features. It was also purely an industrial community, affording therefore an unparalleled opportunity for the study of the relationships and the correlation between living environment and working environment. Psychiatric assistance was made available in the forms of hospital service, community service, and a program to prevent mental breakdowns within the plants by detection and early treatment. On the basis of this experience, the Oak Ridge psychiatrists conclude that the causes of emotional disturbances in industry lie primarily within the individual and the exciting mechanisms lie in the home or in his social surroundings. In only 10 percent of on-the-job emotional disturbances was the exciting factor found in the industrial environment. However, a minimum amount of on-the-job treatment resulted in a conspicuous on-the-job improvement and in an increased number of home adjustments. This is important from the point of view of the broader aspects of industrial psychiatry, its contribution as an emotional first-aid station, and the new recognition that if the physical and mental health of workers is to be advanced, attention must be paid not only to the working environment but also to conditions outside the plant and to the coordination of industrial facilities with community facilities.

The thesis that certain occupations carry special psychological health hazards for certain types of people was notably expounded by Cameron in a recent article describing five fairly specific danger zones. The first embraces certain jobs, often found in assembly line and inspection work, which call for intense utilization of a limited range of the individual's behavioral equipment. The second, more extensive and difficult to

remedy, is that of fragmented jobs due to modern industrial policy of breaking down a process into parts which can be dealt with by the machine and introducing workers as links to carry on what cannot be done mechanically. A third hazard exists in jobs failing to require full participation of the worker, monotonous jobs which do not demand his full attention yet never permit him complete freedom or relaxation. The fourth relates to tempo, to jobs requiring speed at marked variance with the natural tempo of the worker, yet repetitious at the same time—a circumstance particularly hazardous for those who are over-precise, conscientious and rigid in their requirements upon themselves. Finally there are job settings which are peculiarly hazardous for some individuals: the presence of considerable frustration, the lack of personal contact with the worker's superior, unsatisfying informal organization of the department, etc. Dr. Cameron finds that many of the behavioral reactions in these cases are singularly persistent and incapacitating, and he stresses the importance of preventive measures and early diagnosis (14).

Personality problems in the managerial group are obviously of considerable importance. Meltzer made some interesting observations on the subject in a recent article, pointing out the frequency of hostility and aggression, frustration and anxiety at this level, with personality trends ranging all the way from compliant personalities to over-dominant ones. Frustration in managerial groups is especially prevalent when the original set-up of an organization has not been changed sufficiently to incorporate the growth of the plant. The life-history of a company, states Meltzer, carries with it mores, feelings, sentiments, beliefs and expressions that become stereotyped and fixed. Paranoid and reactionary executives surround themselves with inadequates who will take punishment, but more realistic employers hire the best available brains and skill, recognizing the need for this type of manager for efficient operation (15).

Dershimer stresses the importance of the industrial psychiatrist's learning everything possible about the organization and healthy functioning of the industry with which he is

concerned before tackling indiscriminately the psychiatric problems thereof. This basic knowledge, he points out with considerable justice, has been underestimated in much of the literature of psychiatry in industry. "Industries, like individuals, have their own personalities based on the personalities of top management, on company policies, the type of industry, and a host of other varying factors." There are great variations between different departments of the same industry, differences in the emotional atmosphere, differences too in the physical hazards and in many other aspects which help shape the psychiatric problems of a particular plant. The entire article is a very worthwhile contribution, with practical directives for psychiatry in industry (16).

This cross-section of the considerable literature on the subject of industrial psychiatry appearing in the first post-war year in medical, psychiatric and industrial journals is encouraging evidence of a richly integrated approach to this long neglected branch of the specialty, promising much for its future development as a preventive arm of industrial medicine and as an active force in the field of industrial human relations.

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ADMINISTRATIVE, FORENSIC AND MILITARY PSYCHIATRY

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ADMINISTRATIVE PSYCHIATRY

The literature in this field continues to grow, partly on account of military administrative contributions, but perhaps even more because of the growing interest on the part of the public in the details of institutional care of the mentally ill and the shortcomings of that care.

Bowman(1) in his presidential address to The American Psychiatric Association deals, among other important matters, with the criticisms, and discusses the facts and the reasons for the existence of features which merit criticism.

Menninger(2) discusses some of the administrative problems met in an army convalescent hospital, emphasizing the need for cooperation with other specialties and the need of integration of psychiatry with psychology and social work. Hayman(3) presents the administrative aspect of combat psychoneurosis. Blain(4) gives a thoroughgoing presentation of the medical program of the Veterans Administration: many of the salient features of this progressive program are already well known in practice to most of our readers.

Horatio Pollock(5, 6) outlines the history of the family care movement and the requisites for the further development of this form of supervision. He estimates that with the establishment of family care colonies, it would be possible "to use family care for at least one-third of the patients now cared for in institutions for mental defectives and in hospitals for mental disease."

Gamble(7) discusses state sterilization programs.

Johnson(8) presents an extended and careful study of the growing problem of old-

age psychoses. He estimates that as compared with 1207 admissions in this group in 1941, Pennsylvania may expect 2103 by 1950 and 3561 by 1980. He emphasizes the importance of the recognition of this as a separate problem, and the provision of an adequate geriatrics unit in each mental hospital.

Weber, Plunkett and MacCurdy(9) study the problem of control of tuberculosis in mental hospitals. In 68,743 x-rays, they found 4.7% to have clinically significant tuberculous infection, and conclude that mental hospitals make up one of the major reservoirs. They report a death rate in the New York state hospitals of 593.6 per 100,000 as against a general tuberculosis death rate for the state at large of 46.8.

These are but a few of the interesting articles in this field; many other topics are found, such as psychiatric nursing and social work, training of personnel, and psychiatry in general hospitals. Several articles of psychiatric interest have appeared in journals especially designed for the general hospital administrator.

The Maudsley Lecture, given this year by Sir Laurence Broch(10), recently chairman of the Board of Control, deals with "Psychiatry and the Public Service." Finally, everyone interested in the long range aspects of psychiatric planning should be familiar with C. P. Blacker's highly significant and stimulating volume recently published in England entitled "Neurosis and the Mental Health Services."

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FORENSIC PSYCHIATRY

Perhaps of primary interest is the continuation in its second series of the University of Illinois National Symposium on Scientific Proof and Relations of Law and Medicine, under the editorship of Professor Hubert Winston Smith. Several of the articles published in this series in 1946 are of special interest to neurologists and psychiatrists, viz. Keschnner's(1) on Simulation of Nervous and Mental Disease, Kennedy and Denker's(2) on Medico-legal Aspects of Spinal Cord Injuries, and Overholser and Weihofen's(3) on Commitment of the Mentally Ill.

In the field of causation, Abrahamsen(4) discusses motivation, pointing out the fact that the rôle of the unconscious, despite its importance, is ignored by the law and the public; a change in attitude is called for. Bromberg and Rodgers(5) studying 8,280 naval personnel convicted by courts martial, found only 40 to be users of marihuana, and conclude that there is no positive relationship between aggressive crime and use of the drug either in the Navy or in civilian life (as shown by the history of the offenders).

A note in the *Psychiatric Quarterly*(6) presents the important fact that an institute of forensic medicine is a part of the plans for the expansion of Bellevue Hospital and New York University Medical School; the need of formal training in this field is self-evident.

S. H. Kaufman and Judge Bok(7) present from practical experience the value of formal psychiatric examinations in the criminal court; and Colonel Lipscomb(8) discusses the problem of mental accountability under military law. The Army Technical Bulletin on this topic is printed in full in the Journal (9).

Bychowski and Curran(10) present a forceful and comprehensive study of current problems in medico-legal testimony.

Dr. W. Norwood East, the dean of English forensic psychiatrists, considers at length the problems of crime and punishment as a psychiatrist views them(11).

An interesting departure for a legal periodical is the presentation by Coon(12) of the principal psychoses with their legal possibilities.

The legislative mills turned out a relatively small grist, probably since a good many were not sitting.

Alabama (c. 468 of 1945) progressed half way on the road to modernity by cutting the number of jurors required for a "lunacy" hearing from twelve to six.

Maine (c. 63 of 1946) defines a mental defective under 17 as one having a mental age not greater than three-fourths of the subject's life age or under three years.

Maryland (c. 387 of 1945) permits the committed patient to demand a court hearing for discharge, either with or without jury; probably not an improvement in administration!

Michigan made decided progress by establishing a department of mental health (c. 271 of 1945) and by substituting the term "mentally diseased" for "insane" in its commitment law (c. 301 of 1945).

Utah (c. 130 of 1945) extended the sterilization law to include non-committed persons found to be mentally ill, mentally defective, or epileptic.

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MILITARY PSYCHIATRY

During the year just past, many medical officers who were engaged in psychiatric work in the services have returned to civilian life and have had somewhat more time in which to digest and present their experiences. New

civilian problems relating to the veteran, too, have arisen. As a consequence, the bibliography continues large; the articles are approximately as numerous as in 1945. Space permits mention of only a few out of a variegated and rich literature.

Newell and Lidz(1) discuss the toxicity of atabrine; although they saw only 2 cases of psychosis per 1000 using atabrine, they stress the importance of awareness of this possibility.

Aita and Kerman(2), Bailey(3), and Brehaut(4) present the symptomatology of closed head injuries due to blast.

Coleman(5) presents the importance of the positive and preventive possibilities of the group factor in military life. Davis(6) discusses the disorganization of behavior in fatigue.

Much space is devoted to the various forms of therapy in various groups and circumstances. Goldfarb and Kiene(7) recount their experiences with the shock therapies in the ETO; they found a high rate of remission with ECT particularly, and emphasize the different course followed by psychoses in the military as compared with the civilian. Group therapy is discussed by Klopfer(8) and Pearson(9). Erb and Bond(10) deal with sodium amytal narcosis in emotional disorders of combat flyers. Grinker(11) considers the psychological predisposition to the development of combat fatigue, while Chodoff(12) and Sturdevant(13) report on the combat-induced anxiety state as seen after return to duty. Rothschild(14) gives a review of neurological and psychiatric cases in the southwest Pacific area.

Numerous special groups and types of problems are treated. Will(15) and Gardner(16) consider the Naval prisoner and the rôle of the psychiatrist in his care. Katz(17) describes the neuropathologic manifestations found in a Japanese prison camp. Kepecs(18) discusses psychiatric disorders in Puerto Rican troops, and McHarg(19) presents a consideration of the mental health of submariners.

Hutt(20) and Wittson(21) and others report on phases of the contribution of the clinical psychologist.

Harwood(22) reports on returned fliers with neurosis, and finds that nearly one-half of the group studied improved materially within one month without psychotherapy. Eisendorfer and Lewis(23) discuss the internal and external causes of anxiety in returning veterans.

Not to omit the ladies, Preston(24) outlines the function of a mental hygiene unit in a WAC training center.

Morale in battle is discussed by a master—Field Marshal Lord Montgomery(25). "The morale of the soldier," he says, "is the most important single factor in war."

A general review of combat exhaustion is given by Bartemeier(26) and other prominent civilian psychiatrists as a report of a Special Commission.

Finally, to draw conclusions of civilian import, McNeel(27) discusses war psychiatry in retrospect, and General Menninger(28) presents in his Gregory Lecture the lessons from military psychiatry for civilian psychiatry.

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PSYCHIATRIC EDUCATION

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The literature on psychiatric education during the year 1946 can be summarized under three headings:

1. The symposium, "Preparation of Psychiatrists for Practice, Teaching and Research," presented at the 1946 meetings of the American Orthopsychiatric Association. Papers were read by Whitehorn(21), Lamar(9), Rado(15), Lewin(10), Allen(2); Alexander(1), Greenacre(7), Lowry(12), and Krugman(8), and all were published in the July issue of the *American Journal of Orthopsychiatry*.

2. The symposium, "Psychiatry in Medical Education," presented at the 1946 meetings of The American Psychiatric Association. Papers were read by Whitehorn(22), Lewis(11), Porter and Davidson(13), Rennie(16), and Appel, Strecker and Ebaugh(3). These papers, save Appel, *et al.*, have been published in the *AMERICAN JOURNAL OF PSYCHIATRY*.

3. Reports on graduate and postgraduate courses in psychiatry offered by the Army(4), Veterans' Administration(14), Menninger Foundation(6), and University of Minnesota(20).

Let us consider each of these briefly:

1. Whitehorn(21) defines the core of psychiatry as a therapeutic art in which a physician attempts to help a sick person who is emotionally disturbed or unreasonable. He feels that psychiatry has cultivated certain skills in the use of a variety of therapeutic instrumentalities and, to a limited extent, even principles of preventive psychiatry. Further, it has developed a special basic psychodynamic science of its own. Whitehorn points out, as does Rado(15), that psychoanalysis is the essence of psychodynamic science; he also indicates that there are other workers of high prestige and comparable distinction who adhere to special psychobiological formulations as the foundation of psychodynamics.

Whitehorn feels that collaborative contact with internal medicine and physiology will greatly improve the individual psychiatrist and strengthen the profession as a whole. Looking to the future, it behooves us to

avoid undue dogmatism and rigidity in our training programs and to encourage constructive questioning.

Lamar(9) suggests that training programs be revised in the light of searching inquiry as to what is sound, efficient, self-critical, dynamic and logical; that training centers be established in our medical colleges and associated hospitals, given generous support and made inviting to our best teachers; and that psychiatry be made attractive to the highest quality of medical students and young physicians.

Lamar believes that training for all psychiatrists should include three years in institutes, hospitals, clinics, dispensaries, laboratories and other institutions recognized (by constituted boards) as competent to provide satisfactory training in general psychiatry. Subject matter should include a general familiarity with neurological theory and methods of examination; a good working knowledge of psychobiology, psychopathology and clinical psychiatry; as well as of other medical sciences deemed necessary to the understanding and treatment of psychiatric disorders. When all of this is coupled with two years' additional experience in some area of psychiatric occupation, it is considered that the candidate is prepared to submit himself to a qualifying examination.

To this, Rado(15) adds that physicians who plan to specialize in psychiatry should complete a course of graduate training. This training would begin immediately after the internship and would require about three years of full-time work emphasizing the study of psychodynamics. A basic course in the detailed psychodynamics of healthy, neurotic and psychotic behavior should be followed by a course in the psychoanalytic techniques of investigation and treatment, including the reconstructive and briefer methods. Rado holds that the past separation of psychoanalysis from psychiatry was artificial and harmful to both; the sooner this unnatural condition disappears the better. Preliminary to the study of psychodynamics is a personal preparation by each student; he must first undergo a personal psycho-

analysis. If this requirement is unique, so is psychodynamics as a science. This indispensable personal therapeutic analysis is necessary so that the candidate may arrive at a more realistic appraisal of himself as a product of a given time and culture.

Lewin(10) outlines the fundamentals of psychoanalytic training agreed upon by the various institutes of psychoanalysis: (1) the personal analysis of the student; (2) supervised work under experienced teachers; (3) clinical case seminars; (4) lecture courses.

Although there is satisfactory unanimity on basic principles of training, there are a number of problems which confront the analytic training institutes. Chief among these are the large number of students wishing analytic training and the advanced age of the analyst upon his graduation from the institute courses. While a great many students apply for training, many are refused because they do not meet the rigorous admission standards. However, there is not enough room in the various psychoanalytical institutes to train even all of those applicants who are qualified. Regarding the advanced age of the analyst at graduation, it has been suggested that analysts be trained while they are undergraduates or during their intern years. Another suggestion is that special analytic schools be established, analogous to dental schools, to provide analytical training sooner than is now possible. Lewin feels it unlikely that either of these suggestions will be followed, and he believes that analytic training will continue to be predominately postgraduate, lengthy, extremely specialized, and expensive.

Allen(2) takes exception to the statement that a personal analysis is obligatory for those who enter the field of psychiatry. In his opinion, the establishment of this requirement would undermine and eventually destroy the fine rapport which is the result of spontaneous choice. In the end, both psychoanalysis and the student would suffer by this obligatory factor. A personal analysis, as part of professional development, should remain optional, and not fall into the category of being required in order to obtain professional status.

Alexander(1) states that the first prerequisite of sound teaching in any field is

the clarification of fundamental principles and concepts. He notes that the psychosomatic approach, although as old as medicine itself, has developed only very recently from being merely "bedside manner" and medical art into a methodology which is based on controlled observations and scientific concepts. He believes that the term psychosomatics should be limited to the study of the psychological components in organic diseases and to the therapy which attempts to influence this psychological component. The organic treatment requires, as it always has, a thorough knowledge of the existing medical specialties; the psychotherapeutic approach requires a thorough knowledge of psychiatry. Cooperation of psychiatrists with the different medical specialists will remain the only sound approach. While psychiatric concepts need to become an integral part of the training of every physician, psychotherapy itself will remain a specialty requiring as specific and thorough training as surgery.

2. In the symposium on Psychiatry in Medical Education, Whitehorn(22) states that the psychiatrist should develop in medical students those psychiatric concepts and attitudes which are basic to medical science and practice, that he should be able to lead in the scientific advancement in his field through research and the guidance of research, and that he should direct the graduate training of specialists. The ideal teacher should have a thorough understanding of the broad range of the practice of psychiatry and he should have a mastery of a number of professional and social skills. Whitehorn believes that teachers of psychiatry should be chosen primarily for their capacity to lead in the development of a psychiatric science basic to medicine, rather than as mere instructors of current formulations. Psychiatry is becoming increasingly a science of psychodynamics, rather than one chiefly preoccupied with psychopathological phenomena.

Greenacre(7) believes that the primary requirement for the training of psychiatric teachers should be first hand experience in both extramural and intramural methods of treatment; the teacher of psychiatry must bridge the gap between institutional and extramural psychiatry. She insists on the

natural union of practice and teaching by the development of psychiatric divisions in general hospitals so that the care of the mentally ill becomes integrated in all general medical programs. . . . The training for teaching might include considerable extramural clinical experience, rather than hospital and research training only, as is so often the case."

After a lengthy outline on the nature of the material to be given the medical student, Lewis(11) suggests that teaching could be improved by spending more time in the method of psychiatric examination, demonstration of more subclinical cases, better use of psychiatric publications, more emphasis on the sociological aspect of psychiatry and the principles of mental hygiene, and greater utilization of visual aids. Lewis believes that the student of medicine should be taught two fundamental principles: (1) The concept of man as a reacting entity, as a living being in action, and that therefore mental disorders have a "natural history"; (2) Psychiatry is a part of medicine in general and psychosomatic problems will confront the physician regardless of his type of practice. After four years in medical school, the student should be sufficiently informed in psychiatry to: (1) Recognize the usual manifestations of mental disorders and the common emotional components of physically ill patients; (2) Undertake the practical handling of these patients and decide which patients he may treat, which patients need a consultant, and which patients should be referred to a psychiatrist; (3) Do what is necessary to protect the patient, the patient's family, and the interests of society. The rest of psychiatric training may be undertaken as a specialty in postgraduate work.

Porter and Davidson(13) report on a questionnaire sent 412 medical officers graduated from 69 approved medical schools on their undergraduate courses in psychiatry. Responses were received from 162 of the officers; 150 of these offered adverse criticisms. Their criticisms centered around under-emphasis on treatment, impractical treatment methods, too little attention to psychoneurotic and minor cases, and lack of opportunity to see what time or treatment did for the patients. Moreover, they felt that nothing was taught to prepare them to

meet the psychiatric problems seen in a general practitioner's office. The constructive criticisms offered by this questionnaire should be of value in improving the teaching of psychiatry.

3. The Army(4) has embarked upon a program of psychiatric teaching as outlined in SGO Circular Letter 44, 1946. Training centers already designated for three year residencies are Brooke Army Medical Center, Walter Reed, Letterman, and Fitzsimons General Hospital. One year or more of training is possible at Oliver General, Madigan, Beaumont and Percy Jones General Hospitals. The course outlined in the circular is orthodox, and, if adequate personnel is available, the training should be satisfactory.

Powdermaker(14) reports that as of November 1946, the Veterans' Administration had 24 residency training centers with 33 medical schools participating. In addition, 300 psychiatric residents are at work in 30 Veterans' Administration hospitals and clinics. Programs are being developed in 6 additional medical schools, 6 Veterans' Administration hospitals and 9 mental hygiene clinics. The curriculum, teaching, and the selection of residents are the responsibility of the teaching agency selected by the Veterans' Administration. The programs show the revolution that has been going on in recent years in graduate psychiatric education. Emphasis is being placed upon the dynamic approach; the importance of basic psychological, as well as somatic concepts; teaching by conference and seminar methods, original investigation and methods of research. A wide interest in psychoanalysis has been established under the auspices of the Menninger Foundation(6). This program emphasizes the change from intramural to extramural psychiatry and a new orientation to outpatient therapy. The Foundation has the advantage of giving the student inpatient and outpatient experience while keeping him under the guidance of a central school. His instruction is planned and correlated with his progression from one psychiatric service to another. The training should be broad, systematized and standardized, and should include both didactic instruction and supervised clinical work.

The treatise by Smith(20) and the paper

by Rennie(16) report upon the experimental two week's postgraduate course, "Psychotherapy in general Practice," given for 25 physicians at the center for continuation study of the University of Minnesota. This pilot course for general practitioners was the outgrowth of a recommendation made at the Hershey Conference. The questions to be answered by the course were: "Can doctors be taught to practice in their own offices the kind of medicine psychoneurotic patients need? Can they learn to use in all their practice the gist of what modern psychiatry has to say about human personality and the way it works? Can they get some idea of what comprehensive medicine means?" The teaching faculty, made up of an impressive group of young psychiatrists, felt that psychiatry had something that could and must be shared with general medicine and that there was an urgent need of collaboration with general medicine in the care of the psychoneurosis.

The results of the course were generally satisfactory and even outstanding in some respects; appreciation of the importance of emotional factors in medical practice was probably the greatest single gain.

It is encouraging to note the present widespread activity in psychiatric education at all levels, particularly at the postgraduate level. This is in sharp contrast to conditions noted in previous reports (5, 17, 18, 19), in which during the war years there was a sharp reduction in undergraduate and graduate teaching personnel, restriction of curricular hours, and curtailment of residency training. As a result of the war, attention has been focused upon the need for intensive psychiatric training of medical students, general practitioners, and specialists in psychiatry. This is the responsibility of the entire medical faculty and not alone of the psychiatric department. Moreover, psychiatric education is no longer the province of a few favored schools and of a few leaders, but the obligation of all psychiatric faculties and educators.

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AWARDS AND CITATIONS

The following is the last list of awards and citations received from the Office of the Surgeon General, Washington, D. C.

MAJOR RALPH W. BARRIS, Medical Corps. ARMY COMMENDATION RIBBON. "For rendering meritorious service from 24 September 1944 to 11 April 1946, as Chief of Neurology and Neurosyphilis Center, Ashford General Hospital, White Sulphur Springs, West Virginia, Major Barris rendered valuable contributions to the Medical Service, reflecting great credit to his profession and commendation to himself."

LT. COL. WALTER E. BARTON. LEGION OF MERIT. "Lt. Col. Walter E. Barton served in various assignments in the office of the Surgeon General, Washington, from April 1943 to June 1945. Combining rare qualities of technical knowledge and experience with a high sense of professional responsibility, he was largely responsible for the organization and early development of the Reconditioning program for convalescent Army patients. His specific services in shaping the doctrine and policy of the four inter-related services of occupational therapy, rehabilitation of the war blind and deafened, general reconditioning and reconditioning of neuropsychiatric patients, were instrumental in furthering the standard of professional medical care and reflect the highest credit upon himself and the Army Medical Corps."

COLONEL JOHN M. CALDWELL, JR., Medical Corps. ARMY COMMENDATION RIBBON. "For meritorious service in Japan from 2 September 1945 to 28 February 1946. As Commanding Officer of the 54th General Hospital and of the 27th General Hospital, Colonel Caldwell contributed immeasurably to the successful maintenance of efficient medical administration in Hollandia, New Guinea, and Japan. His commendable establishment of immediate and effective hospital facilities during numerous moves, the success attained in neuropsychiatric service, and his initiative and foresight constituted an exemplary demonstration of leadership. The admirable performance of Colonel Caldwell added greatly to the modern facilities and protective measures offered the troops of the occupation forces in Japan."

OLEINICK P. CONSTANTINE. SELECTIVE SERVICE MEDAL. "In appreciation of your loyal and faithful adherence to duty given voluntarily and without compensation to the impartial administration of the Selective Service System, the Government of these United States expresses its gratitude in this public recognition of your patriotic services."

LT. COL. JOHN M. COTTON, Medical Corps, AUS. LEGION OF MERIT. "From July 1944 to October 1945, conceived, organized and commanded the Neuropsychiatric Treatment Branch, Welch Convalescent Hospital, Daytona Beach, Florida. He devised training programs for duty personnel and

operational methods that became models for similar Army Service Forces installations. His services were rendered with an unselfish devotion to the welfare of his patients."

LT. COL. ARNOLD EISENDORFER, Medical Corps. ARMY COMMENDATION RIBBON. "For meritorious service and devotion to duty as neuropsychiatrist and Chief Neuropsychiatrist, Headquarters, ASFTC, Fort Lewis, Washington, from 1 July 1944 to 11 January 1946. His skillful handling, through utilization of outstanding professional ability, of large numbers of psychoneurotic soldiers resulted in the readjustment and return to duty status of a high percentage of all persons processed, contributing materially to the welfare and record of the command."

MAJOR ARNOLD EISENDORFER, Medical Corps. ARMY COMMENDATION RIBBON (Oak Leaf Cluster). "For meritorious service as Chief, Consultation Service and Chief Neuropsychiatrist, Camp Abbot, Oregon, from 15 May 1943 to 4 June 1944. At a time when the Consultation Service was an innovation and its developments in many respects novel and untried, Major Eisendorfer, through his outstanding professional ability, leadership, ingenuity and untiring energy, organized and operated the neuropsychiatric consultation service and mental hygiene program so successfully that it became a model for other services, and contributed materially to the effective utilization of manpower in the Army."

MAJOR HARRY L. FREEDMAN. ARMY COMMENDATION RIBBON. "Major Freedman, as Director, Mental Hygiene Unit, Headquarters, Eastern Signal Corps Unit Training Center, Fort Monmouth, New Jersey, from 22 December 1941 to 22 November 1943, capably discharged important responsibilities in the organization and operation of a psychiatric unit for the reclassification and elimination of maladjusted soldiers."

MAJOR HARRY L. FREEDMAN, Medical Corps. CONSPICUOUS SERVICE CROSS, presented by His Excellency, The Governor of the State of New York. "On behalf of the Representatives in the Legislature of the State of New York, for exceptionally meritorious conduct in the performance of outstanding services for his country in the field of military mental hygiene and psychiatry during the war."

1ST LT. MAX L. HUTT, M. A. C. ARMY COMMENDATION RIBBON. "During World War II, the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department has been exceptional when

compared with others of the same grade of similar position, and I wish to commend you for your outstanding contribution as Chief of the Psychology Branch of the Neuropsychiatry Consultants Division, Office of the Surgeon General, from 13 February 1946 to 14 June 1946."

MAJOR JORDAN A. KELLING, Medical Corps. ARMY COMMENDATION RIBBON. "For performance of meritorious service while serving as Psychiatrist, Special Training Unit, War Department Personnel Center, Camp Shelby, Miss., from June 1943 to November 1945. Through his skill, knowledge, good judgment and unselfish devotion to duty, Major Kelling contributed substantially to the successful accomplishment of the military mission of this Post."

CAPTAIN ROBERT C. LONGAN, JR. ARMY COMMENDATION RIBBON. "During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and I wish to commend you for your outstanding contribution as Chief, Psychiatry Branch, and as Assistant Chief, Neuropsychiatry Consultants Division, Office of The Surgeon General, from 23 December 1945 to 31 October 1946."

BRIG. GENERAL WILLIAM C. MENNINGER. ARMY COMMENDATION RIBBON. "During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position and I wish to commend you for your outstanding contribution as Chief Consultant in Neuropsychiatry to The Surgeon General and Director of the Neuropsychiatry Consultants Division, Office of The Surgeon General, from 20 November 1945 to 28 June 1946."

COLONEL JOHN M. MURRAY, Medical Corps, AUS. LEGION OF MERIT. "As Chief of the Psychiatric Branch, Office of the Air Surgeon, during the period from January 1943 to October 1944, Colonel Murray displayed extraordinary foresight and professional skill in successfully completing the organization of psychiatric service of the Army Air Forces. His outstanding achievement of the establishment of schools for the indoctrination of medical officers in modern psychiatric methods reflects great credit upon himself and the military service."

MAJOR BENEDICT NAGLER, Medical Corps. ARMY COMMENDATION RIBBON. "Major Benedict Nagler, M. C., is hereby authorized to wear the Army Commendation Ribbon by direction of the Secretary of War.

"During World War II the Medical Department carried out its mission with outstanding success. This achievement was made possible only through the combined efforts of all Medical Department personnel. Your service with the Medical Department

has been exceptional when compared with others of the same grade of similar positions, and I wish to commend you for your outstanding contribution as Assistant Chief and later as Chief of the Neuropsychiatric Section, Cushing General Hospital, Framingham, Massachusetts, from 25 October 1943 to 27 March 1946."

COLONEL CLEVE C. ODOM, Medical Corps. LEGION OF MERIT. "Colonel Cleve C. Odom, Medical Corps, Army of the United States, while serving as commanding officer of Mason General Hospital, distinguished himself through outstanding service. Colonel Odom expanded Mason General Hospital from a 1,320 to a 3,032 bed hospital during his tenure of command and provided instruction of the highest quality for medical officers and nurses undergoing instruction in the School of Military Neuropsychiatry operated at this station. Through his broad experience in neuropsychiatry and hospital administration, untiring efforts, remarkable initiative and enthusiastic and virile leadership, Mason General Hospital attained a prominent place in military neuropsychiatry and administered the best of care and treatment to the neuropsychiatric patients of the Army. His cumulative achievements reflect great credit on himself and the medical corps."

LT. COLONEL SAMUEL PASTER. LEGION OF MERIT. "Lt. Col. Samuel Paster, M. C., AUS, as Chief, Neuropsychiatric Service, Kennedy General Hospital, Memphis, Tennessee, from December 1942 to December 1945, instituted methods of treatment which became a part of the established reconditioning program of the Army. His services were of immeasurable value to the mentally ill and were rendered with an unselfish devotion to their welfare."

LT. COL. HERBERT S. RIPLEY, JR., Medical Corps. CITATION FOR BRONZE STAR MEDAL. "For meritorious achievement in Biak, The Netherlands East Indies, from 15 October 1944 to 1 August 1945, in connection with military operations against the enemy. As chief of the neuropsychiatric section of a large general hospital, Lt. Colonel Ripley was responsible for the planning and organization of complete facilities for the care and treatment of psychotic cases. Despite difficult working conditions and an acute shortage of experienced personnel, he succeeded through unselfish and diligent labor in providing an efficient service during a period in which large numbers of patients were being received from the Philippine Island campaigns. He devoted additional time to the instruction and training of other medical officers, and supervised the establishment and operation of a convalescent and rehabilitation section which received high praise from ranking medical authorities. As a result of these capable efforts, many patients who ordinarily would have been evacuated to the United States were rehabilitated and returned to duty in the theater. By his superior professional ability, resourcefulness, and devotion to duty, Lt. Col. Ripley made a distinguished contribution to the care of battle casualties in the Southwest Pacific Area."

LT. COLONEL PERRY C. TALKINGTON, Medical Corps. BRONZE STAR MEDAL. "For meritorious service in connection with military operations against an enemy of the United States during the period 1 August 1944 to 8 May 1945. The superior manner in which Colonel Talkington performed his exacting duties as Neuropsychiatric Consultant, Medical Section, Headquarters Third U. S. Army,

distinguishes him as an outstanding officer. His professional skill and organizing ability were important contributions in forming and maintaining a vital Neuropsychiatric Center in the Third U. S. Army area. Colonel Talkington's many accomplishments; his sound judgment and loyal, untiring devotion to duty reflect great credit upon himself and the military service."

NOTICE TO MEMBERS OF THE AMERICAN PSYCHIATRIC ASSOCIATION

In accordance with the provisions of Article VIII of the Constitution of the Association, and in accordance with the vote of Council, notification is hereby given that at the 1947 meeting the following amendments proposed by the Committee on Membership will be presented for vote:

Strike out Article III, Section V and insert the following in its place:

SECTION V. Members hereafter shall be chosen from physicians who have specialized in the practice of psychiatry for at least three years and after fulfilling the requirements of Associate Members. Members shall be recommended to Fellowship as it becomes apparent that they deserve this recognition.

Amend Article III, Section VI to read as follows:

SECTION VI. Associate Members shall be physicians who have had at least one year's practice in a mental hospital or its equivalent.

COMMENT

LETTER FROM FRANCE

The "Letter from France," appearing in this issue of the JOURNAL, is the response to a request addressed to Dr. René Charpentier, editor-in-chief of the *Annales Medico-psychologiques*, for an article reporting on psychiatric activities in France during recent years when communication between our French colleagues and their western brethren had been cut off.

It was suggested that such an article would be a welcome revival of a custom that prevailed when the *Annales* and the JOURNAL were both young, and when from time to time a "Letter from France" appeared in our pages to acquaint our readers with the particular interests and doings of our neighbors across the seas.

Dr. Charpentier replied most cordially, promising his friendly and full collaboration "in any way that may contribute to render more intimate the relations between American and French psychiatrists, and in particular between the excellent *American Journal of Psychiatry* and the *Annales Medico-psychologiques*."

Being unable to undertake the preparation of the article in question himself, Dr. Charpentier invited his collaborator Dr. Paul Cossa to do so and the latter generously consented. Dr. Cossa, former chief of the psychiatric clinic of the Faculty of Medicine of Paris and neurologist to the hospitals of Nice, is the author of a number of books on the anatomy and physiopathology of the nervous system and neurological and psychiatric therapies. He has been at considerable pains to prepare a review of some of the important accomplishments in psychiatry in France since the year 1939. It is an extraordinary record which bears testimony to the courage, resourcefulness and perseverance of our French colleagues in pursuing their accustomed scientific labors and producing results under conditions well-nigh intolerable.

We express our gratitude to Dr. Charpentier and to Dr. Cossa for the "Letter from France", which we hope will be the first of a new series that will revive an ancient and friendly custom.

THE PSYCHIATRIC FOUNDATION

The Psychiatric Foundation has been established for the purpose of raising funds with which to carry out the objectives of The American Psychiatric Association. Initially approved by the parent organization, it is being founded in fact by the numerous letters and contributions from the members of our Association. At this time over nine hundred encouraging and inspiring letters and contributions totaling more than ten thousand dollars manifest the sincere determination of our members to begin turning the gears of psychiatry for the practical benefit of a great many people.

The first project which The Foundation is supporting is one which aims to assist the mental hospitals in the United States and Canada to bring about the necessary corrections and improvements. This is a project of our Association submitted by the Committee on Psychiatric Standards and Policies and approved by the Council for the inspection and rating of public and private mental hospitals. This project follows the pattern

of the one carried out by the American College of Surgeons. In addition to the funds which The Foundation will provide for this purpose, the project will require the patient assistance of every hospital superintendent in supplying the Committee with the information which it needs.

In its efforts to raise large sums of money to implement some of the carefully considered recommendations of the Standing Committees of our Association, The Foundation will naturally have to publicize existing conditions and explain the financial needs necessary to correct these conditions. In doing so, it may duplicate the educational efforts of existing organizations. Unfortunately this cannot be avoided. The principal purpose for creating The Foundation is to establish an organization for acquiring funds with which to assist psychiatry to become more effective for the general good.

LEO H. BARTEMEIER, M. D.,
President,

The Psychiatric Foundation.

NEWS AND NOTES

COUNCIL MEETING, AMERICAN PSYCHIATRIC ASSOCIATION

The following transactions represent the high lights of the regular mid-winter meeting of The Council, which was held in New York City on December fourteenth and fifteenth:

The next annual meeting of the Association, which will be held at the Hotel Pennsylvania in New York City, will begin on Monday, May nineteenth and continue through Friday, May twenty-third.

The President, Doctor Samuel W. Hamilton, will give his address at the opening session.

The second day of the meeting will be devoted to a series of group discussions which are being arranged by the Committee on Reorganization. These sessions will be staggered in time and the topics to be discussed are The Duties of the Proposed Medical Adviser and His Office, Medical Education, Research, Public Education, Methods of Nominating Officers, Standards and Policies and The JOURNAL. Those participating in these discussions will prepare resolutions which will be discussed and acted upon at a general meeting of the membership on Thursday.

One afternoon of the annual meeting will be devoted to The Psychiatric Foundation.

Two evenings will be given over to round table discussions.

The annual meeting of the Association in 1948 will take place in Portland, Oregon.

The Council voted that the Nominating Committee be requested to submit separate nominations for the position of Secretary and Treasurer. No amendment of the Constitution will be necessary to effect this change.

The Association will publish a monthly News Bulletin which will be distributed to the members of the Association without charge for a period of one year. The preparation and the selection of material for the Bulletin will be under the supervision of an Editor and his Staff.

The Council approved the recommenda-

tion of the Committee on Standards and Policies that the Society create the machinery for the inspection and rating of both public and private mental hospitals. The Council approved the recommendation of the Committee that a "Form for Inspection" be sent to the superintendents of mental hospitals. The Council also filed a request with The Psychiatric Foundation for a grant of seventy thousand dollars beginning July 1, 1947 in order to implement the recommendation of the Committee on Standards and Policies.

LEO H. BARTEMEIER, M. D.,
Secretary-Treasurer.

GROUP FOR THE ADVANCEMENT OF PSYCHIATRY.—About sixty-five members of The American Psychiatric Association met as a group at Rye, N. Y., on November 4-6, 1946, to discuss current problems in psychiatry. Nine committees were active, but the focus of the meeting was upon medical education. Under the chairmanship of Dr. T. A. C. Rennie, this committee plans to meet monthly in New York to continue work on recommendations for improving the content and methods of teaching psychiatry.

The committee on therapy, under Dr. Ralph Kaufman, completed recommendations concerning shock therapy which are being circulated for study and comment.

The chairman of the group, Dr. W. C. Menninger, announces that the next meeting will be held in the spring to work on problems concerning the state hospital patient, under the chairmanship of Dr. Kenneth E. Appel.

This meeting was made possible by the Commonwealth Fund.

THE MENNINGER FOUNDATION.—Applications are being received for 3 positions in the research department of The Menninger Foundation with opportunity afforded for clinical work and teaching. Minimum requirements are three years experience in psy-

chiatric practice or psychiatric research plus a completed training analysis; or five years psychiatric practice, plus a completed personal analysis. Further information may be obtained by writing to Dr. Merton M. Gill, Assistant Director, Research Department, The Menninger Foundation, Topeka, Kansas.

MEDICO-LEGAL RELATIONS.—No. 1 of Vol. 8 (July 1946) of the *Journal of Clinical Psychopathology* is devoted to the publication of eight papers from the second series of symposia on the relations of law and medicine, arranged by Dr. Hubert Winston Smith, professor of legal medicine, University of Illinois. Certain other papers in this series, as well as in the first series, have been published in the JOURNAL (Mch. and Sept., 1943; Mch. and May, 1946).

In addition to the valuable papers by distinguished contributors, this issue of the *Journal of Clinical Psychopathology* is noteworthy for the inclusion of a 30-page bibliography of publications of joint interest to the legal and medical professions prepared by Dr. Smith. This is a distinctly serviceable reference item.

BUILDING AND IMPROVEMENTS, N. Y. STATE HOSPITALS.—The New York State Postwar Public Works Planning Commission has announced the approval of several new projects for expansion and improvements in the state hospital service. These projects cover new construction and improved facilities at Kings Park State Hospital, Marcy State Hospital, Central Islip State Hospital, Hudson River State Hospital and Letchworth Village, and will involve the expenditure of \$5,763,500.

With these new developments, the Commission to date has planned for 114 projects for new construction, repair, remodeling, etc., in the New York state hospital system at an estimated cost of \$92,842,541.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY EXAMINATIONS.—The tentative dates and location of the next examination for certification in neurology and psychiatry are May 15, 16, 17, 1947, in Philadelphia, Pennsylvania. Applications should be in the

hands of the secretary 90 days before the examination is scheduled. The last possible date for filing is March 1, 1947.

OPENING FOR PSYCHIATRIST IN BOYS' VOCATIONAL SCHOOL.—A full-time residency is to be filled in the Boys' Vocational School at Lansing, Michigan. This school accommodates 350 maladjusted boys. The appointee will be director of the clinic and have charge of the staff consisting of physician, psychologists, social workers and nurses. The position carries an annual salary of \$6780 and retirement benefits.

Enquiries may be addressed to Francis P. Kelly, Esq., Chief Transactions Division, Michigan Civil Service Commission, Unit 4, Lansing, Michigan.

DR. LEVINE APPOINTED AT UNIVERSITY OF CINCINNATI.—Dr. Maurice Levine has been appointed professor of psychiatry at the University of Cincinnati Medical College to succeed Dr. John Romano who resigned to accept a similar position at the University of Rochester.

Dr. Levine, a graduate of the University of Cincinnati, will direct the psychiatric service at the General Hospital, the Central Clinic of the Community Chest, and will have charge of the projected Psychiatric Institute at the Jewish Hospital.

VETERANS ADMINISTRATION TRAINING COURSES.—Two additional residency training programs for Veterans Administration physicians in neurology have been organized. The residencies, which will vary from one to three years, according to a doctor's previous experience, are designed to prepare residents for certification in neurology by the American Board of Psychiatry and Neurology.

One training program will be conducted under the joint auspices of Boston University, Tufts Medical College and Harvard University. Residents will be stationed at the Veterans Administration Hospital at Framingham, Massachusetts (formerly the Army's Cushing General Hospital). Applications should be sent to Dr. Harry C. Solomon, Chairman, Deans Subcommittee for Neuropsychiatry, Harvard University Medical School, Boston, Massachusetts.

The other program will be conducted at Jefferson University Medical College and Clinic, Philadelphia, Pennsylvania, under the auspices of the Veterans Administration Philadelphia Deans Committee, and directed by Dr. Bernard J. Alpers, professor of neurology, Jefferson Medical College. Applications should be sent to Dr. Edward A. Strecker, Chairman, Deans Subcommittee for Neuropsychiatry, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

AMERICAN SOCIETY OF ELECTROENCEPHALOGRAPHY.—In June, 1946, at the request of the Eastern Association of Electroencephalographers, the American Physiological Society appointed Dr. Herbert Jasper and Dr. Frederick A. Gibbs; the American Neurological Association, Dr. Robert Aird, and Dr. Charles Aring; The American Psychiatric Association, Dr. Charles Stephenson and Dr. Robert S. Schwab, and the American

Medical Association, Dr. E. J. Baldes, to form a Council of seven members for the purpose of organizing a national society of electroencephalography. The purpose of this national society was to supervise and raise the standards of laboratories, workers and publications in this field.

In December, 1946, this Council of seven members met in Boston and formed the American Society of Electroencephalography, the officers consisting of President, Dr. Jasper; Vice-President, Dr. Gibbs; Secretary, Dr. Schwab, and Treasurer, Dr. Mary A. B. Brazier.

Workers are invited to consult the Society regarding their research projects and manuscripts may be submitted for critical evaluation.

Enquiries may be sent to Dr. Robt. S. Schwab, Secretary American Society of Electroencephalography, Massachusetts General Hospital, Boston, 14, Mass.

PSYCHIATRIC PLACEMENT SERVICE TO BE CONTINUED

In the summer of 1945 it became increasingly evident that physicians in the armed forces who were interested in obtaining further training in psychiatry and in finding positions in this field upon their return to civilian life, would require advice and assistance. In order to meet this emergency, The American Psychiatric Association and The National Committee for Mental Hygiene joined forces and set up a Psychiatric Personnel Placement Service, which began operating on December 11, 1945, under the guidance of an advisory committee, composed of representatives of the two organizations.

During the past year a great deal has been accomplished. Nation-wide surveys of general and state hospitals, of private mental hospitals, of community and mental hygiene clinics, of medical schools, and of foundations have been conducted, in order that there might be a complete file of the positions and training opportunities available in psychiatry. Several hundred physicians have been interviewed personally in the office, and their careers in psychiatry have been planned and mapped out for them. The director of the Placement Service made several field trips to various parts of the country, during which he discussed the personnel situation with prospective employees. Many physicians have been placed in training and in attractive positions. The problems confronting psychiatry have been pointed out at important medical meetings and conferences.

Up to and including December 10, 1946, which is the date of completion of the year's undertaking, over 900 physicians had registered with the Placement Service, either by letter or by personal interview. During the last few months the number of new applications received has been dwindling, and the requests for assistance diminishing. All physicians who indicated that they would be released from the army or the navy up to January 1, 1947, have been referred to positions or have been given advice concerning training. It is felt, therefore, that the emergency placement program has been completed. It is the opinion of the advisory committee that it is important to have a central place where data relative to training and positions in psychiatry can be obtained by interested physicians. The activities of the Psychiatric Personnel Placement Service will be continued by The National

Committee for Mental Hygiene at 1790 Broadway, New York 19, N. Y., and applications from physicians seeking placement in positions or in training in the field of psychiatry are still invited.

Dr. Forrest M. Harrison, who has directed the Placement Service for the past year, has accepted the position of assistant superintendent of the Delaware State Hospital, Farnhurst, Delaware, and assumed his duties there on November 20, 1946.

CERTIFIED BY THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY,
INC., NEW YORK CITY, DECEMBER 16, 17, 18, 1946

PSYCHIATRY

(By Examination)

- *Alden, John, 490 Post St., San Francisco, Calif.
Aldrich, C. Knight, Dept. of Student Health, State of Wisconsin Gen'l Hospital, Madison, Wisc.
Allen, Adam O., Vets. Admin., Coatesville, Pa.
Alpert, Herman S., Marcy State Hospital, Marcy, N. Y.
Anderson, Charles L., 802 Griswold St., Worthington, Ohio.
Beanstock, Sam, Vets. Admin., Downey, Ill.
Beckenstein, Nathan, 681 Clarkson Ave., Brooklyn, N. Y.
Bennett, Robert B., New Jersey State Hospital, Trenton, N. J.
Bianchi, John A., 681 Clarkson Ave., Brooklyn, N. Y.
Bernard, Viola, 930 Fifth Ave., New York City.
Beyer, Margaret V., Springfield State Hospital, Sykesville, Md.
Boner, Albert J., 15 West Main St., Madison, Wisc.
Boyd, Ina Helene, Lock Box 1840, San Antonio 6, Texas.
Branche, George Clayton, Vets. Admin. Hospital, Tuskegee, Ala.
Bromberg, Robert, 40 East 61st St., New York City.
Brown, Warren T., 333 Cedar St., New Haven, Conn.
Buckman, Charles, Creedmoor State Hospital, Queens Village, N. Y.
Burack, Samuel, Rm. 817, Blum Bldg., 624 S. Michigan Ave., Chicago, Ill.
Burn, Edward Morse, 111 N. 49th St., Phila., Pa.
Campbell, James A., Letchworth Village, Thiells, N. Y.
Capellari, Elmer E., 6435 Clifford St., Pittsburgh, Pa.
Cassone, Vincent J., State Hospital, Danville, Pa.
Chiarello, Carmelo, 681 Clarkson Ave., Brooklyn, N. Y.
Chirico, Dominick F., 1084 Bay Ridge Parkway, Brooklyn, N. Y.
Chornyak, John, Mental Hygiene Clinic, Vets. Admin., 366 W. Adams St., Chicago, Ill.
Clauser, William J., 74 Fenwood Rd., Boston, Mass.
Cohen, Irwin Justus, 441 West 56th St., New York City.
Cohen, M. Michael, 8735 Bay Parkway, Brooklyn 14, N. Y.
Davidson, Henry A., 533 Mt. Prospect Ave., Newark, N. J.
Davis, John Evan, State Hospital, Trenton, N. J.
Davis, Vernam T., U. S. Marine Hospital, Ellis Island, New York Harbor, N. Y.
Dell, Cort, Amerigo Philip, 32 Buffalo St., Canandaigua, N. Y.
Eisenstein, Victor W., 1212 Fifth Ave., New York City.
English, Harrison Force, 19 Morningside Drive, Trenton, N. J.
Feldman, Harold, 1600 South Ave., Rochester, N. Y.
Ferber, Leon, 4804 Elkins Ave., Nashville, Tenn.
Finkelhor, Howard S., 8144 Jenkins Arcade, Pittsburgh, Pa.
Fogel, Ernest J., Harrisburg State Hospital, Harrisburg, Pa.
Fox, Henry Morgenthau, Peter Bent Brigham Hospital, Boston 15, Mass.
Frank, Jerome D., 2651 Connecticut Ave., N. W., Washington 8, D. C.
Frankfurth, Vincent L., U. S. Veterans Hospital, Northampton, Mass.
Freed, Joe Edward, S. Car. State Hospital, Columbia, S. C.
*Friedman, Arnold P., 71 East 77th St., New York City.
Funkhouser, James B., McGuire Hospital, Richmond, Va.
Furst, William, 188 Clinton Ave., Newark 5, N. J.
Gansloser, Wilbert M., 3624 Arsenal St., St. Louis, Mo.
Gershman, Harry, Central Islip State Hospital, Central Islip, N. Y.
Gilman, Leonard, Walter Reed General Hospital, Washington, D. C.
Ginsberg, Leon, Essex County Hospital, Cedar Grove, N. J.
Ginsberg, Stewart T., Vets. Hospital, Marion, Ind.
Glueck, Bernard C., Jr., Stony Lodge, Ossining, N. Y.
Goitein, Lionel, 3 East 74th St., New York City.
Golden, Morton M., 144 Willow St., Brooklyn, N. Y.
Goldstein, Joseph L., Highland Hospital, Asheville, N. C.
Golob, Meter B., 153 Seaman Ave., New York 34, N. Y.
Gordy, Samuel T., 4312 Spruce St., Phila., Pa.
Gould, Louis N., Norwich State Hospital, Norwich, Conn.

* Denotes complementary certification.

- Grand, Henry G., 157 East 62nd St., New York City.
- Greizman, Saul, Torrance State Hospital, Torrance, Pa.
- Grossman, S. Cyrus, 538 Maccabees Bldg., Detroit 26, Mich.
- Hagopian, Peter B., Danvers State Hospital, P. O. Box 50, Hathorne, Mass.
- Haimes, Solomon M., 235 South 17th St., Phila., Pa.
- Hallo, Louis, Vets. Admin. Hospital, Chillicothe, Ohio.
- Harris, Irving D., 907 S. Wolcott, Chicago, Ill.
- Harris, Richard Lamar, Vets. Admin., Neuropsychiatric Hospital, Los Angeles 25, Calif.
- Hawkins, William B., Veterans Hospital, Lyons, N. J.
- Hoffman, Harry, 805 Park Ave., Plainfield, N. J.
- Holland, Charlton Gilmore, Univ. of Virginia Hosp., Charlottesville, Va.
- Hornisher, Joseph J., Brooke General Hospital, Fort Sam Houston, Tex.
- Horst, Elmer Leaman, Vets. Admin., Coatesville, Pa.
- Horvath, Imre E., Vets. Admin. Hospital, Box 2614, Hines, Ill.
- Howell, Ira L., 215 Ross Ave., Alamosa, Colo.
- Huber, Charles B., Veterans Hospital, Roanoke 17, Va.
- Hutchins, William J., 555 Park Ave., New York City.
- Hyatt, Hervert W., Veterans Hospital, American Lake, Wash.
- Ivey, Evelyn P., 28 De Hart St., Morristown, N. J.
- Jackman, Abraham I., 6750 Cornell Ave., Chicago 49, Ill.
- Jarvis, Jack Reynolds, Sheppard & Enoch Pratt Hosp., Towson, Md.
- Johnson, Chester Karle, Jr., Bryce Hospital, Tuscaloosa, Ala.
- Kaufmann, Erich, 1600 South Ave., Rochester, N. Y.
- Kay, Frank Alfred, 510 Medical Arts Bldg., Birmingham, Ala.
- Kelly, Francis W., 200 Retreat Ave., Hartford, Conn.
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BOOK REVIEWS

CRIME AND THE HUMAN MIND. By *David Abrahamson, M.D.* (New York: Columbia University Press, 1944.)

It is to the author's credit that he approaches the subject by considering the criminal as a whole, emphasizing the influence of the environment in the genesis of the criminal's behavior and stressing the emotional as well as the unconscious motivations. The whole book is permeated with the functional dynamic rather than a static approach. It suffers, however, from numerous defects and limitations which seriously impair its usefulness. It reflects a desire to please all sorts of views. The author has mixed up Freud, Jung, and Adolf Meyer, without producing a synthetic product. Thus we are treated to Jung's concept of the collective unconscious as a foundation to explain part of the criminal's inheritance, built out of instincts and archetypes. This, as presented, does not seem to fit well with the analytic and non-analytic approaches that the author makes elsewhere. Had the author considered Freud's contribution to anthropology, "Totem and Taboo" for instance, he could have explained the criminality without resorting to the highly theoretical concept of the collective unconscious. The author recognizes that "each offender selects his own crime" and further contends "that since desire toward crime is present in all humans, criminals are not very different from any law abiding citizen." He then goes on to say that "crime may, therefore, be only a surface symptom or a symptom of mental illness which has existed a long time." Yet, in the same breath, he accepts the old-fashioned and out-worn concept of accidental and chronic criminality, which entirely contradicts the above statement.

Concerning the etiology of crime, the author makes a broad statement, namely, that "crime may be considered a product of a person's tendencies and the situation of the moment interacting with his mental resistance" without specifying the exact connotation of these terms, which in themselves are nebulous enough. The reviewer feels the author also tends to contradict himself when he states; "It may be assumed then that it is not the tendencies and resistance embodied in the structure of the individual which carry him into crime, nor the situation as such, but the fact that he is functioning in the wrong set-up." And what is the "wrong set-up"? No statement appears to clarify it. The author thus appears to reduce the etiological concept of crime into a simple formula, based on generalizations.

Nowhere, however, are the author's limitations in his attempts to establish psychogenic motivations in crime more evident than in his discussion of psychopathy and super-ego. Thus in speaking of psychopaths, he states that the psychopath has no conscience or has a damaged conscience. This

is a very strange statement to make. Just what does he mean by damaged or impaired conscience? (p. 60, p. 125). Is it the frontal lobe that is sick, or any particular area? What does he mean by conscience anyway? All this doesn't mean a thing unless he would give a definitive statement about the development and structure of super-ego. The whole chapter or classification is superficial and is not based on dynamics. In view of the fact that psychopathy seems the most touchy subject in the whole field of psychiatry and at the same time most important for the problem of crime, one would expect it to receive considerable attention whereas actually, it receives very little.

While the author should be praised for advocating the psychogenetic approach to crime, his views are not based on his own cases, but consist almost entirely of borrowed material, taken mainly from the records from the Court of General Sessions indicating but little personal knowledge of the matter. It is not even certain from the book that the author understands psychoanalysis. One might say that while he knows a lot about psychoanalysis, he does not understand psychoanalysis. Nothing, however, reveals so clearly the author's basic weakness as his presentation of cases. One would suppose that a man who stresses so emphatically psychogenesis in crime would give us at least a few well-thought-out, well-worked-out, cases. Instead we are treated to commonplace descriptive material which can be found in the files of any clinic, followed by the author's extravagant and wholly unwarranted interpretations. Let us see what he actually gives us.

Case 1. (Page 3.) A certain man killed his wife because he got tired of her. What a spectacular discovery of a cause of murder! The author further states that the man married the woman because she was a symbol of his mother. No proof whatever is given of this or other symbolism. In fact, the case is so brief, it couldn't be proof of anything. It is this type of statement that incurs the criticism of many people because of large deductions from unusually small premises.

Case 2. (Page 57.) A certain individual had a congenital clubfoot which considerably hampered his normal development. He tried to compensate for this by drinking, so he could have more courage and become more aggressive. The result was a series of crimes. Is this not a remarkable explanation for a man who talks about psychodynamics? The reviewer does not feel that physical inferiority need cause one to become a criminal. There has been no substantial basis for such a supposition. Inferiorities are apt to make the individual a non-criminal neurotic. Short-statured Japanese built colossi that exceeded the pyramids in size. The late President Roosevelt, who was handicapped most of his adult life, is a towering example of an inferiority not interfering with normal progress.

Case 3. (Page 62.) A man forges a check to support his family. To say that this is a puerile and jejune explanation for an author who claims to speak in psychodynamic terms is an understatement. If all the people who had difficulties supporting their families forged checks there would not be enough prisons to house even a small fraction.

Case 4. (Page 97.) A twenty-year-old man, who, two years prior to his present offense, had committed burglary, was now charged with a "holdup." No psychogenetic explanation is given as to why this man stole except to say, "It seems that the patient's first 'nervous breakdown' was apparently an approaching schizophrenic episode in which he committed the burglary."

Case 5. (Page 62.) A thirty-two-year-old man was convicted of burglary. The author infers that this man, because of being reared in poor surroundings and starting work when he was fourteen in addition to the fact that his wife left him, had found it difficult to get a suitable job. He was induced to enter a store and steal food and clothing for himself and his child. The author merely states, "We see a man, who in spite of absence of emotional conflicts, perpetuated a crime which to a large extent was prompted by the circumstances." And this from an author whose chief thesis is that crimes are caused by emotional factors!

Case 6. (Page 156.) "A man suffering from schizophrenia murdered his wife to whom he had been married for fifteen years. When he was a child his mother left him and his father for another man. In school he was teased about being "motherless" and he withdrew and became seclusive, etc. Relations with his wife became strained—one evening he shot and killed her." The author fails to elaborate on the psychodynamics of this particular crime except to state without one grain of verification, that there was an identification of his wife with his mother and that the psychosis seemed to be a kind of preparatory state to annihilating the victim.

It would be distressing to continue anatomizing his cases. They are all of the same pattern. Not one gives us even a glimmer of insight into the psychogenesis of crime.

The author's chapter on the history of criminality begins with a discussion of the much overquoted and by now obsolete view of Lombroso. He brings the reviews up to 1900 and then, for some unexplained reason, leaps to the 1930's omitting a whole generation and a vast amount of useful material that is probably much more pertinent than a consideration of Lombroso. Surely there was the place to mention Charles H. Hughes, the famous editor of "Alienist and Neurologist," who has contributed so much to clarifying our views on psychiatry and criminality. More amazing still is the failure to mention Dr. William A. White, whose name does not appear anywhere in the book. This is truly unforgivable for a man who claims to have spent some time at St. Elizabeths Hospital. Dr. White may truly be regarded as the father of criminal psychopathology in Amer-

ica. His books dealing with psychiatry and psychology of crime were most popular during his lifetime and have done a great deal to stimulate interest in the subject. After 1930, the author mentions in one paragraph a number of men most of whom would not even personally lay claim to being experts in criminal psychopathology—and after all, he is writing a book on criminal psychopathology and not on penology or forensics. His only justification in citing these names appears to be that these men occupy key positions in one field or another and, therefore, it is good policy to mention them. Dead men, even though they stand significantly as milestones in the history of the subject, are no longer useful to him.

His attempts to classify criminals into accidental and chronic belies his previous claim that crime must be an expression of a life-long situation; for in the light of psychodynamics, even those who are accidentally criminals have a long background which has prepared them for the so-called accident of crime. The division of murders into manifest murderers and symptomatic (p. 162 et seq.) is not justified by any dynamics because he ignores the emotional aspects, so that an individual who would be classed as a manifest murderer may actually, in terms of psychodynamics, be classified otherwise.

The bibliography is significant not by its extent but by its omissions. A total of 150 references are mentioned, of which about one-half belong to the general field of Psychiatry and the others to criminality proper. When one reflects that there must be at least several thousand references on the subject, if one goes back as far as the author started, the inclusion of only seventy-five and the failure to include the major part of the rest, is significant. For instance, though the author discusses psychopathy, Maugh's Monograph on the subject of psychopathy is not mentioned, nor are many other worthwhile contributions to the subject. The author appears to have indulged in hasty reading. It is also of interest that in the discussion of kleptomania and pyromania he omits entirely the work of Stekel, who was a pioneer in that field. Neither does he mention Schmidt, a pupil of Jung. The only work of Stekel's the author mentions is "Sadism and Masochism," which has little direct bearing on criminality.

It may be questioned whether the author is fully qualified to write a book on criminal psychodynamics. His preparation does not impress one as being quite sufficient; his own references in the bibliography are but few. The book lacks the maturity and reflection that come only with the ripeness of experience. There is no royal road to criminal psychopathology except the long and arduous one of hard work. If the author devotes himself to this field for another ten years, he may still produce a very useful work. Particularly should he make his own researches in case material, which should represent many hours of effort, and not be confined to superficial interviews. The material upon which he has drawn does not satisfy the demand for deeper motivation for which he makes

such a valiant claim. However, on the basis of his endeavor to expose the psychic roots of crime and to emphasize the "man-behind-the crime" aspect of criminality, the book may be worth the attention of all those interested in criminology.

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PSYCHIATRIC ASPECTS OF MODERN WARFARE. By
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This book set forth to be controversial and succeeded; the chief controversy was in attempting to ascertain its purpose. The fact that it came to the reviewer after the heat of actual war had greatly cooled off made many of the energetically rhetorical expressions fall quite short. Similarly, the usual basic statements describing military psychiatry which though decorated by much metaphor and well-turned phrases gave the impression that the author was an avid exponent of the obvious. The text itself was composed of very well known facts of general and military psychiatry abundantly interspersed with abruptly placed personal opinions or evangelisms—and gruesome pictorial representations of the horrors of war.

With a number of the statements the reviewer disagreed: "... that psychiatric treatment is more of an art than a science," and "... the psychiatrist, living in a world of mental misfits, is more likely to read a dire significance into certain symptoms . . ." and "only the ignorant and the superstitious are wont to invoke the Deity . . . in times of crisis." Or, "Many who break down in modern warfare have been found to have been men who achieved little success in civil life. Many were occupational misfits." The reviewer wondered at the author's comparisons between the "havoc and wreckage . . . in the war torn countries of Europe" and the "surprisingly few psychiatric casualties" of the people of Britain. Difficulty was encountered in following the trend from the "unholy mess" we humans made of our "mundane affairs" in "orgies of decimation" because of the "predatory behaviour of capitalist nations" and because "people want to fight" through the psychology of authoritarianism. A sober, brief outline of the emotional (and neuro-sympathetic-endocrine) ills of the combatant, the home-fronter and besieged civilian was presented in about eighty pages. So much material had to be covered that the big items were necessarily quite sketchy.

As a concluding section the author became more positively protagonistic for the universal knowledge of psychology as a cure for world ills—although the author doubtlessly knows that telling a psychiatrically ill patient of his illness brings him no nearer to health.

Many statements in the book impressed the reviewer that the author was actively dissatisfied with the existing religious-philosophic-economic-psychiatric state of the world but that to him there might be hope in "political faith" (Russian type)

with "self-determined socialism" and "something to take the place of Christianity."

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THE FALLING SICKNESS: A History of Epilepsy from the Greeks to the Beginnings of Modern Neurology. By *Owsei Temkin*. (Baltimore: Johns Hopkins Press, 1945.)

The belief that the history of a disease process is essential to full understanding of that disease is nowhere better exemplified than in the history of Epilepsy as embodied in "The Falling Sickness" by Owsei Temkin.

From the teachings of Hippocrates and his contributors who first attacked the superstitions, magic and wizardry of antiquity and saw in the brain the real seat of the disease, the reader is deftly guided through the conflicting theories and periods as they reflected the general cultural level of the times to the end of the 19th Century when, somewhat belatedly, the enlightenment of Pinel, Esquirol, Charcot and above all Hughlings Jackson had dispelled the taboos, amulets and mysticisms of The Sacred Disease. In fact, the whole long history of epilepsy is bound up in the controversial wranglings of the Theologians who insisted upon the divine or demoniacal basis of the disease and the physicians who, with varying success, upheld the natural causes of the disease. After Hippocrates and his treatise on phlegm and black bile, Galen taught that the psychic pneuma lay in the ventricles exuding at intervals over the nerve roots—hence the therapeutic necessity of the convulsive movements to shake them off. He classified epilepsy under two headings:

- I. Idiopathic epilepsy arising in the brain.
- II. Sympathetic epilepsy arising elsewhere and passing to the brain in the guise of a breeze (the early aura).

This classification persisted in name if not in import throughout the varying theories of the ages until the late 18th and early 19th Centuries.

Though the influence of the Great Alexandrian School successfully upheld the Hippocratic and Galenic theories, no new ideas evolved during this period. Indeed during the Renaissance the influence of the physicians appreciably waned before the renewed efforts of the theologians and their demoniacal possession. However, the Period of the Renaissance saw many notable observations recorded, some of which are the origin of epilepsy in a penetrating head wound permitting a fetid ichor to reach the brain; the development of epilepsy many years after a head injury; the cure of epilepsy by trephine and bone elevation and the causative relation of epilepsy to syphilis and some infective diseases.

Somewhat later, localized epilepsy was well recognized and about 1600 A.D. Le Pois rung the death knell of sympathetic epilepsy (the breeze theory) of the older physicians in his dictum that

all epilepsy had its origin in the brain. His theory of irritation was soon displaced by the chemical and physio-chemical theories of Sylvius and Willis and finally during the 19th Century The Falling Sickness, with its theological trappings of mysticism and religious conjuration gave way before the overwhelming forces of logic and reason, as propounded in the teachings of Brown-Sequard, Claude Bernard, Bright, Charcot and Hughlings Jackson, of whom the latter is given his preëminent place in the history of this disease. Of passing interest is the author's confirmation of the generally held belief that amongst the epileptics of history may be found such notables as Julius Cæsar, Caligula, Torquata, Mohammed, Charles V and Napoleon.

It is impossible to fully portray the worth of this book in a mere review. Though primarily a storehouse of factual lore, well assembled, very readable and abounding in references, this volume, illustrated with a number of old prints, presents a most artistic design—all of which recommends it to all students of this disease.

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CHARACTER ANALYSIS. By *Wilhelm Reich*. (New York: The Orgone Press, 1945).

This book was first published in the German language in 1933 and the present edition is the first translation into the English language. In his preface to the present edition the author states that the book appears in its original form although character-analysis as presented at that time has since developed into "vegetotherapy" with far-reaching changes in technics as well as concepts. No discussion of these newer concepts is included in the present volume beyond the indication that the author now thinks in terms of "biotherapy" and considers the psychotherapeutic technics of character-analysis as "an indispensable auxiliary technique in vegetotherapy."

The present volume presents the psychotherapeutic technics of character-analysis as they were worked out in Vienna between the years 1925 and 1933. The author states that the book was written in the framework of Freud's psychoanalysis and feels that in this framework it is still valid today. It was written primarily for psychoanalysts in practice and in training. The material of the book is presented in two parts: Part I. Technique, and Part II. Theory of Character Formation. To the present reviewer the material in Part I seemed the more valuable part of the book. Here the author keeps his discussion of psychotherapeutic technics close to his own clinical experience and it is this which gives this section particular weight. The practising psychotherapist will find a good deal of interest in the author's discussion of the handling of latent negative resistance.

Many American readers may feel that the author defines his strategic objective in therapy—direct sexual gratification as the criterion of and requirement for the maintenance of emotional health—within unduly rigid and dogmatic limits. How-

ever, his differentiation between the analysis of *what* the patient says (content-interpretation) and *how* the patient says it (character-analysis), and his discussion of effective timing, especially in the early phases of treatment, seem particularly worthy of attention.

While the theoretical nature of Part II of the book is indicated in the title of this section, the material is presented in somewhat more dogmatic form than strict scientific standards would seem to justify.

Included in this book as an Appendix is the translation of a paper read by the author at the International Psychoanalytic Congress in 1934, entitled "Psychic Contact and Vegetative Current." The material in this paper apparently is an embryonic form of the author's later concepts, and might logically have been omitted from the present volume.

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THE SEXUAL REVOLUTION. By *Wilhelm Reich*. (New York: The Orgone Press, 1945.)

This volume is the first translation into the English language and the third edition of the book published previously in the German language in the years 1930 and 1936. It is primarily a polemic rather than a scientific study, both in the manner of presentation and in the content of the material presented. The author has one central thesis which he accepts as factual without question of doubt and which may be stated briefly: the miseries of the world, both individual and social, are directly caused by the suppression of natural sex strivings; this suppression is not due to biological factors but to the restrictive moral ("sex-negative") attitudes of society; with the elimination of sexual repression, antisocial impulses will also be eliminated; this is to be accomplished by, specifically, replacing the moral regulations sanctioning sexual abstinence for children and adolescents and compulsory marital fidelity which is "in itself pathological" and the "arch-enemy of natural morality," by permissive, "sex-positive" attitudes in these respects. In fact the author sees all moral regulation as antithetical to nature, "life-negative" and productive of antisocial impulses. The authoritarian family structure, he believes, has been and is the educational apparatus which has perpetuated these moral regulations of society. If they are to be overthrown—the sexual revolution—a non-authoritative, collective structure must be substituted for the authoritarian family.

The book is organized in two parts, the titles of which indicate the nature of the content. Part I is entitled "The Fiasco of Sexual Moralism" and Part II, "The Struggle for the 'New Life' in the Soviet Union." The author feels that the Russian Communists made a proper start in their first five-year plan toward a greater sexual freedom for the individual. With subsequent legislation reestablishing certain moral regulations, the advance of

the sexual revolution as the author sees it has suffered.

This book may have some appeal to the reader who already holds or would like to hold views similar to the author's. It is questionable whether the reader who approaches the book more objectively will find sufficient evidence to lead to his adherence to the author's thesis. Certainly the present-day clinician will take exception to the author's all-or-none perspective, with failure to give thoughtful consideration to alternative possibilities, and to his narrow, inflexible etiologic concepts and therapeutic objectives.

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THE PERSON IN THE BODY. By Leland F. Hinsie, M.D. (New York: W. W. Norton and Co., Inc., 1945.)

This small and interesting volume addressed primarily to physicians in branches of medicine other than psychiatry should be of value also to the psychiatric specialist. Most, if not all, formal text-books of psychiatry impress the reviewer as top-heavy with descriptive matter based on State Hospital material and as over-sedulous in devoting space to the traditional classifications of personality disorder. Many texts of this sort are likely to leave the medical student with little practical information about those patients who constitute the vast majority of personality disorders. This book ably and vividly focuses attention on the very problems that most physicians in practice will confront.

The first case history, with which the book opens, is excellently presented and interpreted. The complaint reveals its vivid symbolism naturally and with no forcing of issues as the patient is encouraged to redefine it while he repeatedly discusses his life situation. The complex and intricate dynamic factors reveal themselves in a formulation not only effective but remarkably concise. This opening chapter is definitely the high point of the book.

There is, however, much of value in the work as a whole. The beginner in psychiatric study will find a broad discussion of factors leading to conflict and of the mechanisms that result in symptoms and disability. The dynamic principles of personality disorder are well illustrated in concrete clinical examples. Many sound points about psychotherapy are brought out. Among these one

notes the necessity of letting the patient find his way to insight, instead of forcing an untimely verbal explanation from without; the deep importance of realizing that, however inaccurate his words, the patient's complaint usually represents something genuine and something serious. Common and true forces in human development, such as the fact that a child may almost completely lose sight of one side—good or bad—of a parent, are expounded so ably that many who know of these matters vaguely in words may, on reading, grasp them emotionally and practically.

One might complain of the author's sharply distinguished use of the words "mind" and "body" with the easy implication of an unnecessary and scarcely defensible dualism that psychiatry is trying to outgrow. Even when the *mind* is referred to as an "organ" of the body confusion may be offered to a naive reader. Psychiatrists who have worked through these verbal pit-falls will probably understand the author and realize that he is not laboring with false assumptions; but these terms may give gratuitous trouble to the beginner. A meanly carping critic, particularly if moved by envy of the generally good English of this work, might delight in pointing out that there is little reason to use the word *individual* repeatedly when *person* or *patient* would be better usage and free of the artificiality in that outworn but of archaic novelty that so regularly, and involuntarily, pock-marks even the best medical writing. More serious arguments might be raised about the statement that real sexual feeling and activity do not begin until just before puberty. Such possible arguments would revolve, perhaps, about what such words as *sex* mean. It must be plain to any psychiatrist that genital activity often occurs long before this time, even as it is plain that mature sexual attitudes, in a full and healthy sense, all too frequently are never achieved. One might ask also that the author explain more definitely his distinction between *genderism* and *sexuality*. This term might be more useful for definite application if it were more adequately clarified.

Despite any critical or argumentative questions which might be brought, this book remains a valuable contribution to psychiatry where the need for good material is urgent. It is a brief and modest expression of the principles that have been most helpful in dealing with personality problems. It is highly recommended.

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THE HISTORY OF THE MALARIA TREATMENT OF GENERAL PARALYSIS

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COMMENT AND TRANSLATION FROM THE GERMAN

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In an editorial of the *Journal of the American Medical Association* of April 8, 1944, it is stated that priority for the use of malaria and relapsing fever in the treatment of general paralysis (dementia paralytica) should belong to Rosenblum. This editorial statement is based on the publication by Zakon and Neymann, entitled, "Alexander Samoilovich Rosenblum, His Contribution to Fever Therapy" (*Arch. Dermat. & Syph.*, 48: 52, 1943).

Enthusiasm over the beneficial effect of fever in psychoses was common among psychiatrists of the middle of the last century. Several papers on this subject, some of which were quoted by Neymann and Zakon, had appeared a decade before the communication of A. S. Rosenblum was published in 1877. It is true that Rosenblum inoculated a group of mental patients with relapsing fever, but he did not continue this mode of treatment and there was no fever therapy, as we know it today, until Wagner-Jauregg on August 31, 1918, published the results of the studies on the first patients with dementia paralytica, who had been treated a year previously with inoculation malaria.

The merit of Wagner-Jauregg was that he soon realized that the beneficial effect of fever was restricted to cases of dementia paralytica. For over 20 years he then focused all his efforts on this type of mental illness, using tuberculin, typhoid vaccines and even streptococci of erysipelas to produce fever.

Wagner-Jauregg was well aware of the work of Rosenblum. I have in my possession a manuscript by Wagner-Jauregg, entitled, "The History of the Malaria Treatment of General Paralysis," which was written

by him for a monograph dealing with the malaria therapy of neurosyphilis. The publication of the monograph has been postponed several times because of other important work. Later the war intervened. It is now doubtful whether the monograph will appear at all.

Wagner-Jauregg died October 1, 1940. In 1927 he was awarded the Nobel Prize for his work in the use of malaria fever in the treatment of dementia paralytica. He was the first and so far the only psychiatrist to have been the winner of this prize.

"The History of the Malaria Treatment of General Paralysis," written by him in August 1935, is a valuable document. For the benefit of future medical historians, Wagner-Jauregg's version in this matter is published.

THE HISTORY OF THE MALARIA TREATMENT OF GENERAL PARALYSIS

JULIUS WAGNER-JAUREGG, M.D.

It is a great pleasure to contribute to this monograph the chapter on the History of Malaria Therapy. I can add a few interesting details and also will take this opportunity to correct erroneous statements which have been made on this subject.

The origin of the malaria treatment of general paralysis of the insane goes back to the centuries-old observation that mental patients following an incidental febrile disease occasionally show great improvement, which may go on to complete recovery. After having made similar observations, I proposed in 1887 in a publication(1) to produce intentionally febrile diseases as a treatment method for psychiatric patients. I had in mind malaria and erysipelas. Either one of these conditions could be transmitted to

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other individuals without great danger. Already at that time I did not share the prevalent idea that elevated temperature is the main factor which is responsible for the favorable results of this mode of therapy. I said: "Some authors are inclined to attribute to the fever, *i. e.*, to the increase in body temperature a particular effect upon the mental condition. This theory may possibly be correct in those cases in which an improvement of the mental symptoms takes place during the fever. But this view is certainly not justified in those instances in which the improvement of the mental symptoms sets in after the febrile disease is terminated, for instance, in typhoid fever during the period of convalescence or in erysipelas in the stage of desquamation. And it is in this group that the greatest number of permanent recoveries occur. Furthermore, in not a few instances the mental symptoms become worse during the period of fever."

Being anxious to have my proposals put into practice, I infected several mental patients—among these were no general paralytics—with a culture of the streptococcus of erysipelas, which had proven to be very virulent in a patient with an inoperable carcinoma of the breast. But in my patients neither erysipelas nor fever developed. There was only slight redness at the site of inoculation, which disappeared after a few days.

The experiments were discontinued because, in the meantime, I had been appointed professor of psychiatry at the University of Graz (Austria). Furthermore, medical science of that period looked with disfavor at experimentation on human beings. This spirit showed itself openly in the hostile attitude of the public and of the authorities when Hirschl(2) inoculated 9 general paralytic patients with syphilis. Today this would be a matter of course, but at that time the teaching of Fournier of the syphilitic etiology of general paralysis had not been generally accepted. Hirschl almost went to prison for his zealous scientific endeavors.

With the development of tuberculin in 1890 by Robert Koch, a substance was at hand with which one could produce fever without resorting to an infectious disease. I began treating patients of the Psychiatric Clinic at Graz (Austria) with injections

of tuberculin. These experiments also had to be stopped prematurely because tuberculin was soon considered a dangerous preparation. For several years tuberculin was banned from good medical practice. It had almost become a crime to use it. At this time I was called to Vienna as the head of the University Hospital for Nervous and Mental Diseases. The vehement dispute over the use of tuberculin was calming down and its value was slowly recognized. In 1894 I resumed the experimental work with tuberculin fever, and a year later reported my experiences(3). I reiterated in this paper my previous statement that elevated temperature is not the fundamental factor of the treatment.

The experiments with tuberculin, using all types of mental patients, were continued. Many therapeutic successes were observed in patients who fell in diagnostic groups which have a high percentage of spontaneous recoveries. It was therefore difficult to evaluate the exact effect of this treatment method. Among the apparently cured patients, however, were a few cases of general paralysis. This was something unusual and attracted my attention. From this time on the main interest was focused on general paralytic patients. First, a comparative study was carried out to determine whether tuberculin really influenced the course of general paralysis in a favorable way. Sixty-nine general paralytics were given bouts of fever by injecting increasing doses of tuberculin until a dose of 0.1 was reached. They were compared with 69 patients who remained untreated. The same experiment was repeated with a group of 60 general paralytics receiving tuberculin injections until the amount of 0.3 was given(4). Four years later the tuberculin-treated patients were compared with those who were left untreated. The result was that the general paralytics who were given tuberculin fever had more and better remissions and also longer duration of life(5). In the meantime I had begun treating with tuberculin general paralytic patients of my private practice, using doses up to 0.3 and later up to 1.00. These cases were, as a rule, not as far advanced as the hospital patients. At the same time I combined the tuberculin injections with mercurial inunctions, because

I never could convince myself that specific anti-syphilitic treatment of general paralysis was without any value whatsoever, a view held by most psychiatrists of that period. With this combined tuberculin-mercury treatment, a complete remission was obtained in quite a few instances with the return of the patients to their former occupation. A report of this work was made in 1909 at the International Medical Congress in Budapest(6).

The tuberculin-mercury therapy of general paralysis, however, was never widely used. The medical scientists of that period were hypnotized by the discovery of the syphilitic etiology of general paralysis and could see the solution of this special problem only in a specific treatment. And yet in 1909 and later the tuberculin-mercury treatment gave better results than any other form of therapy. Today several cases of general paralysis are still alive which were successfully treated with tuberculin and mercury in the second decade of 1900. The number of full remissions in early cases was by no means small. But the relapses were frequent, and only a small number of the complete remissions remained permanent. To make the treatment more effective, I searched for other means. I tried various vaccines, and finally used typhoid vaccines which, when injected intravenously, produced marked febrile reactions. In addition, I replaced mercury by the recently introduced salvarsan. In 1913 I still hoped to work out a satisfactory treatment method without having to resort to the use of inoculation with malaria. In the same year I received a letter from Dr. E. van Dieren of Amsterdam asking me what I thought of the idea of inoculating with malaria general paralytic patients. As a family doctor he had recommended this procedure on several occasions, but the specialists had advised against it. I wrote him to make such experiments which, in my opinion, should be very promising. I added that I might try it myself, if my hopes of treating general paralysis more successfully with typhoid vaccines and salvarsan should not materialize. Dr. van Dieren to my knowledge never inoculated patients with malaria.

The psychologic moment which induced me to try malaria inoculation was prompted

by the following incident. A prominent oil-well engineer was admitted to the Psychiatric Hospital with symptoms of incipient general paralysis. He was given treatment consisting of a combined course of typhoid vaccines and arsphenamines. He recovered to such a degree that he was able to return to the province of Galicia, where he was supervising the drilling of oil-wells. However, several months later he was back in Vienna with all the manifestations of general paralysis. I realized that with the methods of treatment at hand little could be accomplished and that the disease would now rapidly progress to the inevitable fatal outcome. (This was the same engineer whom de Kruif(7) had mentioned in his book.) It was the tragic outlook for this man which again forced on my mind the thought of producing intentionally an infectious disease in general paralytic patients. In addition, other evidence had accumulated that the original idea might well be justified, to produce artificially an infectious disease in these patients. During my work with tuberculin fever I had noted that those patients who by incident developed an abscess, a phlegmonous cellulitis, lobar pneumonia, or a tuberculous infection had frequently the best and most prolonged remissions.

At about the same time, in June 1917, when the hospital was full of wounded military personnel, my assistant Dr. Alfred Fuchs reported to me one morning that a slightly injured soldier had been admitted with chills and fever, apparently having contracted malaria fever on the Balkan front line. "Should he be given quinine?" he asked. I immediately said: "No." This I regarded as a sign of destiny. Because soldiers with malaria were usually not admitted to my wards, which accepted only cases suffering from a psychosis or patients with injuries to the central nervous system. I gave the order to make a blood smear and to examine for malarial parasites. At the same time I asked a shell-shocked soldier, who was very useful for doing odd jobs, to catch all the mosquitoes he could find on the hospital grounds. He returned with a great number of them, and I convinced myself that all the mosquitoes belonged to the species of *Culex*. There were no *Anopheles* in this random sample.

The examination of the blood smear of the soldier with chills and fever had revealed the presence of malarial parasites of the tertian type. It was June 14, 1917. On that day I obtained during a paroxysm a small sample of the soldier's blood, and I inoculated 3 general paralytic patients by rubbing a few drops into several superficial scarifications of the skin. Then the malaria of the soldier was stopped with quinine.

Of the 3 inoculated patients only 2 developed malaria. Additional cases were inoculated subcutaneously with blood obtained from the veins of the originally inoculated general paralytic patients, who by this time were ill with malaria fever. Altogether 9 general paralytics were inoculated in the summer of 1917. Then the inoculations were discontinued because I wanted to see whether this experiment would prove to be a real therapeutic success.

A year later malaria therapy was resumed. This time malaria blood for inoculation was obtained through the courtesy of the physician-in-chief of the ward for malaria patients, who were mostly soldiers from the Balkan armies. Of 4 inoculated patients 3 succumbed to malaria. Soon after inoculation it became apparent that estivo-autumnal parasites (malaria tropica) had been hidden in the strain of tertian malaria and had been used for the inoculations. After this misfortune no new cases were inoculated until September 1919, when Dr. Doerr (now professor of public health and hygiene at the University of Basel, Switzerland) furnished the clinic with an unquestionable strain of tertian malaria. From that time on malaria therapy has been practiced uninterruptedly at the Psychiatric Clinic of Vienna. The malaria strain of September 1919 has been maintained up to the present day—more than 16 years—in continuous human passage. I do not know of any other strain in the world which has been used for so many years. Not even the strain of the New York Psychiatric Institute, which has been maintained for 9 years, from 1923 to 1932, at the time of the report by Kopeloff, Blackman and McGinn(8), can compete with the record of the Vienna strain.

I have been asked how my inner feelings were during the first days and weeks which followed the first inoculations with malaria.

My emotional life at that time and already during the era of the tuberculin experiments has been described by de Kruif somewhat more turbulent than it actually was. The unusual experiment of human malaria inoculations moved me very little. From the previous work I was accustomed to seeing remissions following fever treatment, and the measure of success which might be obtained by the malaria experiment could not be anticipated. Furthermore, we were already in the third year of the war, and its emotional implications became more manifest from day to day. Against such a background a therapeutic experiment could stir me little, in particular since its success could not be foreseen. What meant a few paralytics, who could possibly be saved, in comparison to the thousands of able-bodied and capable men who often died on a single day as the result of the prolongation of the war.

How sceptical I was toward the early successes with the malaria treatment is shown by the fact that I waited a year until the publication of the first report. Very likely I would have hesitated even longer, if the editor of the *Psychiatrisch-Neurologische Wochenschrift*, in which my preliminary communication appeared(9), had not urged me to make a contribution for the *Festschrift* in honor of my friend Dr. Anton, professor of psychiatry at the University of Halle (Germany).

I must add here that already in 1917 malaria therapy was followed up with arsphenamine injections in the same way as salvarsan had previously been given as an adjunct to the tuberculin treatment. It was difficult to convince even the co-workers of my own clinic of the soundness of the combined treatment, and I had to defend vehemently this principle in scientific discussions, until it was generally recognized. Today barely anyone doubts the correctness of this procedure.

Now one may ask the question: Were the inoculations of the summer of 1917 the first attempts of this sort ever made? Some time after the malaria treatment had spread from Vienna to every corner of the world I became aware that a French physician—Dr. Émil Legrain, several years previously had advocated in a publication the use of therapeutic malaria inoculations. On my

desk lies a book by this author, consisting of 612 pages. It was published in 1913 by Maloine in Paris and is entitled: "Traité clinique des fièvres des pays chauds." In the last 12 pages of the book, which deals mainly with the intermittent fevers, the author states that malaria frequently has a good effect upon other diseases. He asserts that it is but a step from this knowledge to the actual use of malaria as a therapeutic means, and he claims to have taken that step. He reported on 13 cases which he had inoculated with malaria followed by beneficial results. Among these were no cases of general paralysis. The group consisted of 2 patients with malignant syphilis, 1 case with luetic ulcers, 4 patients with pulmonary tuberculosis, 1 with an abscess of the testicles, a case with a slow healing wound, an obstinate general eczema, an arthropathy of the knee, and 2 cases with syphilis of the liver. He also recommended inoculation with quartan malaria in the following instances: inoperable carcinoma, tuberculosis of the larynx, tuberculous meningitis, sleeping sickness, epilepsy, certain forms of melancholia, incipient general paralysis and tabes.

It is astounding that such proposals, although no one had taken them up, were forgotten so completely that they entirely should have been lost sight of by contemporaries, when the malaria therapy of general paralysis became known. Even in France, where Pagniez in 1920 without much response directed attention to the malaria treatment and whose article in *La Presse Médicale* of May 30, 1925, finally was responsible for its introduction in Paris, the name of Legrain was not mentioned in spite of a rapidly increasing literature on malaria therapy. (Malaria treatment found its way to Paris via Brussels.) In 1931, I became acquainted, for the first time, with my predecessor Legrain from the introduction to the book by Leroy and Médakovich(10).

Now I acquired Legrain's book and after having read it, I realized why he had been so completely forgotten. Legrain was evidently an individual given to vagaries, who in 1913 still held concepts on malaria which were utterly antiquated. He ridiculed Laveran with his plasmodia and Donald Ross with his mosquitoes and scorned the use of

quinine. Legrain was not taken seriously, there was no one who believed in his successes, and soon he faded from the memory of his colleagues.

It is not in accordance with facts, when Riser(11) makes the statement that since 1910 Legrain had systematically inoculated general paralytic patients with malaria. Legrain has never infected general paralytics with malaria, nor has he treated in a systematic way with inoculation malaria other diseases.

In the literature Rosenblum is usually credited with being the first who inoculated general paralytics for therapeutic purposes, using recurrent fever and not malaria. The facts, however, are that Rosenblum has never inoculated his patients with the idea of treating their mental illness. What he did was to make available his mental patients—among whom were no general paralytics—to the bacteriologist Motschutkoffsky, who in Odessa in the year of 1876 studied the transmissibility of recurrent fever to human beings. Subsequently, a few of these patients recovered from their psychoses and Rosenblum reported this later under an assumed name(12). Rosenblum never continued these experiments.

The suggestion to treat mental cases with malaria was really made by Raggi(13) in 1876, but he never put this idea into practice. Indirect malaria therapy was carried out by Galloni, director of an Italian mental institution, who withheld quinine in psychotic patients who incidentally had contracted malaria because he had observed that such mental patients frequently recovered from their psychoses.

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A THREE-YEAR SURVEY OF ELECTROSHOCK THERAPY

REPORT ON 276 CASES; COMPARATIVE VALUE OF INSULIN-COMA THERAPY

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Electroshock therapy has become firmly entrenched in the psychiatrist's armamentarium in the relatively short time since its introduction. Generally, a new form of treatment gains so rapid and widespread a use when medical science finds itself hopelessly dealing with a disease which is both malignant and obscure in its origins, as is the case with mental illness. When previous therapeutic efforts have been either largely fruitless, or surrounded with great difficulties, the introduction of a new technique is very welcome, especially when it is easy to use, is attended by few complications and produces good—and sometimes spectacular—results. The natural tendency under such conditions is to give the procedure an extensive trial. The new rapidly displaces the old, and other forms of treatment are de-emphasized or discarded—as has been the case with insulin and metrazol shock therapy.

It was with a moderate degree of enthusiasm and scientific curiosity that electroshock therapy was undertaken at Central Islip State Hospital. Our original plan was to act as a testing ground, and consequently many were treated without too much discrimination. However, one principle was maintained. All the patients were treated individually, according to their clinical response and the therapist's impression of them. No special formula was followed regarding number of treatments or grand mals to be given. For instance, when a patient showed little or no change the treatment was not extended unduly, especially if physical complications were feared. However, if there was some ray of hope, or the patient endured the seizures well, the treatment was pressed. Thus it was expected that with this rather random choice, two series of cases would emerge—one given relatively few treatments, and one given a greater number. It should be said, however, that as time elapsed it was more and more firmly felt that extended courses of treatment were of no avail, and that good clinical responses

were made within the first 12 to 15 treatments or hardly ever at all. In the greatest majority of cases, treatment was given three times a week, the generally accepted routine was followed and the usual precautions taken.

A total of 276 patients was treated in the three year period ending June 1, 1945. Although 75% of these were cases of schizophrenia, a sufficiently large number was treated in the other categories to make their results significant, and interesting comparisons possible.

In addition to the type of illness, the age, the number of treatments and type of reaction, and the percent paroled were considered significant factors for study. Patients paroled were in what would generally be called "improved," "much improved" and "recovered" states. Final judgment of their condition was made within four to six weeks to allow for the subsidence of the "organic syndrome" when it occurred. Any marked improvement which occurred after this interval was not—and should not be—considered as necessarily related to the treatment itself. While some patients may not have had too good an insight into the nature of their illness when released, none was considered in any way deluded or hallucinated. The writer believed that each could make a fair to excellent adjustment at his previous duties in society.

It is generally accepted that response to shock treatment is best in patients ill less than one year. As the duration of illness increases, the remission-rate decreases. This is particularly true for the schizophrenias. Consequently, in determining these results, the patients were arranged in two groups—one ill less than a year, and the other for a longer time. The findings are always better in the first group.

Twenty-nine cases of involutional psychosis, melancholia, were treated. Eighteen of them were ill less than a year, received an average of 11 treatments, and had a parole-rate of 94%. The other 11 were sick

more than one year, received an average of 14 treatments, and had a parole-rate of 82%. The average parole-rate for the 29 cases was 90%.

The cases of involutional psychosis, paranoid type, hardly respond as well. Of the 15 treated, 10 were ill less than a year, received an average of 12 treatments, and had a parole-rate of 60%. The average parole-rate for the 15 cases was 47%—markedly lower than the 90% for the type melancholia. Table 1 illustrates the findings in

Fourteen cases of the manic type were treated. Twelve had been ill short of one year, received an average of 15 treatments, and had a parole-rate of 91%. The average parole-rate for the 9 depressives was 89%, and that for the 14 manics 86%. It may be noted that the depressive type required significantly fewer treatments, and that the average age in the entire series of 23 cases was 41. Other details are shown in Table 2.

The differential diagnosis between the manic-depressive psychoses, particularly the

TABLE 1

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALES	NUMBER OF GRAND MALES
INVOLUTIONAL, MELANCHOLIA	ILL OVER ONE YEAR	11	82%	48	14	3	11
	ILL UNDER ONE YEAR	18	94%	50	11	3	8
	ALL	29	90%	49	13	3	10
INVOLUTIONAL, PARANOID	ALL	15	47%	51	13	4	9
	ILL UNDER ONE YEAR	10	60%	51	12	3	9
	ILL OVER ONE YEAR	5	20%	51	15	4	11

detail. All therapists find that the paranoid type responds less well, but have no satisfactory explanation. It is possible that a number so diagnosed are really cases of dementia præcox, paranoid type, in whom therapy is generally less effective.

The manic-depressive psychoses respond very well to electroshock therapy. Unfortunately our series is small, but rather indicative, especially since the results approximate those reported for larger numbers of similar cases. Nine patients of the depressive type were treated. Eight had a duration of less than a year, and all of these could be released after an average of only 11 treatments. The other patient received 15 treatments but did not improve.

depressive type, and the involutional psychoses is often difficult. This is true too, for the subtypes of the involutional psychoses themselves. As a consequence, errors in diagnosis may have been made in sufficient number to color the above results. In order to obviate this somewhat, the main groups may be handled as a whole, and then compared. A useful purpose also seems to be accomplished by this plan because the average age in each series is so similar that we may be dealing with more closely allied illnesses than one would be led to believe by the differentiation in classification.

Twenty-eight of the 44 cases of involutional psychosis had been ill less than one year. They received an average of 12 treat-

ments, and had a parole-rate of 82%. Twenty of the 23 cases of manic-depressive psychosis had been ill under a year. They received an average of 13 treatments, and had a parole-rate of 95%. In the group of involuntions the 16 patients ill over a year had a parole-rate of 63%. In the group of manic-depressives those sick more than a year had a parole-rate of 33%, but here the number treated is too small for serious consideration. The notable difference in the

electroshock therapy is of great advantage for the emotional disturbances of middle life, especially since the average age of the manic-depressives in this series was 41 years.

While it is generally accepted that electroconvulsive treatment is the therapy of choice for the manic-depressive and involutional psychoses, there is still question about its value vis-a-vis insulin therapy in the treatment of schizophrenia. It seems worthwhile, therefore, to examine the results for

TABLE 2

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETITMALES	NUMBER OF GRAND MALES
MANIC-DEPRESSIVE, DEPRESSIVE	ILL OVER ONE YEAR	1	0%	45	15	4	11
	ILL UNDER ONE YEAR	8	100%	41	11	2	9
	ALL	9	89%	41	11	2	9
MANIC-DEPRESSIVE, MANIC	ALL	14	86%	41	15	2	13
	ILL UNDER ONE YEAR	12	91%	40	15	2	13
	ILL OVER ONE YEAR	2	50%	50	16	7	9

parole-rates between the groups ill less and more than one year indicates that the duration of illness is a significant factor determining prognosis in these categories too. The over-all parole-rate for the involutional psychoses was 75% as compared to 87% for the manic-depressive psychoses. In both series an average of 13 treatments was given. (See Table 3).

The above results indicate the decided value of electroshock therapy in the affective psychoses, and emotional illnesses of middle life diagnosed involutional psychosis. Although the latter is usually considered "due to disturbance in endocrine function," there is reason to believe that it is mainly affective in nature, and on that assumption we can definitely conclude from the figures that

the various types as well as the main entity of dementia præcox.

Of the 47 treated cases of dementia præcox, catatonic type, 20 had been ill less than a year and 65% of these were paroled, having received an average of 17 treatments. The remaining 27 cases had been ill more than one year. None of these could be paroled, though they received an average of 19 treatments. The average parole-rate for all was 28%, but the marked contrast between the groups is overwhelming evidence of the importance of early treatment.

The hebephrenic præcokes responded poorly, regardless of the duration of illness. The average parole-rate for the 28 cases treated was 11%, even though the number

of treatments administered approximated that given the catatonic type.

Forty-two percent of the 52 paranoid præcoxes who had been ill less than a year could be paroled, but only 5% of the 82 ill longer than that could leave the hospital after treatment. The striking contrast again emphasizes the significance of the duration of illness in determining the prognosis. The average parole-rate for the 134 paranoid cases was 19%. As is the case with the

ment, however, on the main entity "schizophrenia." It seems wise, therefore, to examine the results for the cases of dementia præcox as a group.

Two hundred and nine cases of dementia præcox were treated. Eighty of this total were ill less than one year at the time of treatment. The parole-rate for this number was 45%, and 16 was the average number of treatments. The remaining 129 patients were ill longer than one year. Their parole-

TABLE 3

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALES	NUMBER OF GRAND MALES
INVOLUTIONAL PSYCHOSES, ALL TYPES	ILL OVER ONE YEAR	16	63%	49	14	3	11
	ILL UNDER ONE YEAR	28	82%	50	12	3	9
	ALL	44	75%	50	13	3	10
MANIC-DEPRESSIVE PSYCHOSES, ALL TYPES	ALL	23	87%	41	13	2	11
	ILL UNDER ONE YEAR	20	95%	40	13	2	11
	ILL OVER ONE YEAR	3	33%	48	15	5	10

other categories of schizophrenia, the parole-rate for the total number of patients, regardless of duration, is none too encouraging. However, the results with the catatonic and paranoid præcoxes who have been ill less than one year give us some cause for hope. (See Table 4 for details and comparison.)

The results just outlined are true for this particular hospital because the criteria for diagnosis of the subtypes of schizophrenia hold more or less in any one institution. However, a comparison with results from another hospital might show a wide variation because the standards for diagnosis differ. Patients who are generally called paranoid præcoxes in one hospital may be typed hebephrenic or catatonic in another, and vice versa. There is more likely to be agree-

ment, however, on the main entity "schizophrenia." It seems wise, therefore, to examine the results for the cases of dementia præcox as a group.

Two hundred and nine cases of dementia præcox were treated. Eighty of this total were ill less than one year at the time of treatment. The parole-rate for this number was 45%, and 16 was the average number of treatments. The remaining 129 patients were ill longer than one year. Their parole-

paroled patients. Further, the remaining 108 patients received an average of 13 treatments, but had a significantly higher parole-rate, namely, 29%. A similar situation exists for each type of schizophrenia, and one may almost predict, in any series of patients given what an experienced therapist deems sufficient treatment for each indi-

parole-rate of 79% for the 67 patients diagnosed involutional and manic-depressive psychosis.

Interesting comparisons may now be made between the schizophrenic and "affective" psychoses by referring to Table 5. In the latter group the results are so overwhelmingly better all along the line, despite fewer

TABLE 4

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALES	NUMBER OF GRAND MALES
DEMENTIA PRAECOX, CATATONIC	ILL OVER ONE YEAR	27	0%	28	19	2	17
	ILL UNDER ONE YEAR	20	65%	30	17	2	15
	ALL	47	28%	29	18	2	16
DEMENTIA PRAECOX, PARANOID	ALL	134	19%	36	16	2	14
	ILL UNDER ONE YEAR	52	42%	37	15	2	13
	ILL OVER ONE YEAR	82	5%	36	16	2	14
DEMENTIA PRAECOX, HEBEPHRENIC	ILL OVER ONE YEAR	20	10%	32	17	3	14
	ILL UNDER ONE YEAR	8	13%	23	15	2	13
	ALL	28	11%	29	17	3	14

vidual case, that those requiring 20 or more treatments will have a significantly lower parole-rate than those deemed to require fewer treatments.

A clearer picture of electroshock's merit in the treatment of the involutional and manic-depressive psychoses may be gained by handling them as a single series. We then find that of 67 patients, 48 had been ill less than a year, and of these 88% could be paroled after an average of 12 treatments. Of the remaining 19 who had been ill more than one year 58% could be released after an average of 14 treatments. This makes a

treatments, that we may assume electroshock therapy to be the treatment of choice for the manic-depressive and involutional psychoses. Whereas only 5% of the praecoxes ill over one year could be released, 58% of the others ill more than one year could be paroled; whereas 45% of the praecoxes with the shorter duration could be sent home, 88% of the others could be released; and while only 20% of the total schizophrenics could leave the hospital, 4 times as many of the others gained a state of remission.

The ascendancy of electroshock treatment

during the past few years has tended to diminish the enthusiasm of psychiatrists for insulin-coma therapy. The relative rapidity with which electroshock can be given, the few ward personnel required in hospital practice, and the ease with which it can be given in office practice have promoted its widespread use. In the past few years of war emergency, hospitals have instituted or enlarged electroshock therapy departments,

præcox. Comparisons of results between hospitals are indicative rather than conclusive because of the numerous extraneous factors which enter to distort them. Among these factors are several differences: (1) in diagnosis and choice of patients for treatment, (2) in opinion about what constitutes a state of remission, (3) in the technical application of the treatment, (4) in the general approach to shock treatment and the

TABLE 5

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALES	NUMBER OF GRAND MALES
DEMENTIA PRÆCOX, ALL TYPES	ILL OVER ONE YEAR	129	5 %	33	17	3	14
	ILL UNDER ONE YEAR	80	45 %	34	16	2	14
	ALL	209	20 %	33	17	3	14
INVOLUTIONAL AND MANIC PSYCHOSES, ALL TYPES	ALL	67	79 %	47	13	3	10
	ILL UNDER ONE YEAR	48	88 %	46	12	2	10
	ILL OVER ONE YEAR	19	58 %	49	14	3	11

and surrendered their insulin treatment wards. In this process schizophrenic patients who ordinarily would have received insulin treatment have been either subjected to electroshock before getting insulin, or have been denied insulin treatment altogether. Consequently, the requirement of giving a patient some form of active treatment has been satisfied, without necessarily having given him the wisest choice of, or succession of treatments.

While we can already conclude that electric is the choice of treatment for the involutional and manic-depressive psychoses, we cannot by any means be as definite about its value for the schizophrenias. No comprehensive or convincing study has yet been made proving one or the other form of therapy superior in the treatment of dementia

patients who receive it, and (5) in the personalities of the therapists.

At Central Islip State Hospital we have been able to overcome many of the distorting factors by maintaining a single department. In it both forms of therapy are administered at the same time by the writer, with the help of a relatively stationary ward personnel. The choice of patients, their treatment, and judgment of their final condition, as well as their release from the hospital are solely in his hands. Consequently the standards are well fixed. The only basic differences which exist are two: (1) one group of patients receives electroshock and the other insulin-coma therapy; (2) the electroshock patients are seen on the treatment-ward 3 times a week for roughly 3 hours, whereas the insulin-treated patients are

seen 5 times a week for a period of 6 hours. Otherwise their recreation, diet and general management are much the same.

At the very time that the patients already reported on were receiving electroshock treatment, a series of patients received insulin-coma therapy under the régime described. A previous article(2) reported the results for this latter group. In a 2 year period insulin treatment was administered to 158 schizophrenics. The parole-rate was 52.5% for all the patients, regardless of the duration of illness. These results are far superior to the 20% parole-rate for the schizophrenics treated with electroshock. Eighty-five of the 158 patients had been ill less than one year. Their parole-rate was 57.6%, again significantly higher than the 45% for those ill a similar length of time and treated with electroshock. The remaining 73 patients had been ill more than a year, and had a parole-rate of 45%—9 times as great as that for the electroshock treated patients of the same duration. These results are shown in Fig. 1.

A further effort was made to determine the comparative value of insulin and electric treatment in schizophrenia by giving some patients insulin-coma therapy, and following it with electroshock if a remission was not produced within 2 months of the termination of hypoglycemic treatment. These particular patients were chosen more or less at random, except that, as a rule, the writer felt there was still some hope for the individual despite insulin-therapy's failure.

Fifty patients were managed in this way. Twenty-eight of them happened to be ill less than one year, even at the time electroshock therapy was undertaken. Their parole-rate was 29%, and they received an average of 17 treatments. The group was composed of 8 catatonics, 7 hebephrenics and 13 paranoids. Four of the first, none of the second, and 4 of the last type could be released.

Twenty-two of the 50 cases were ill more than a year at the time electroshock treatment was begun. None of them could be released, although an average of 18 treatments was administered. This group was composed of 1 catatonic, 4 hebephrenics and 17 paranoid præcoxes.

In the group of 50 who failed to improve with insulin, therefore, only 16% could be released after subsequent electroshock therapy. Half of the 9 catatonics, none of the 11 hebephrenics, and 13% of the 30 paranoids responded satisfactorily to this régime. All of those who could be released had been ill less than a year. Although the type of schizophrenia appears of some significance, only the catatonics reacting well, the duration-of-illness factor seems to be most significant here as elsewhere.

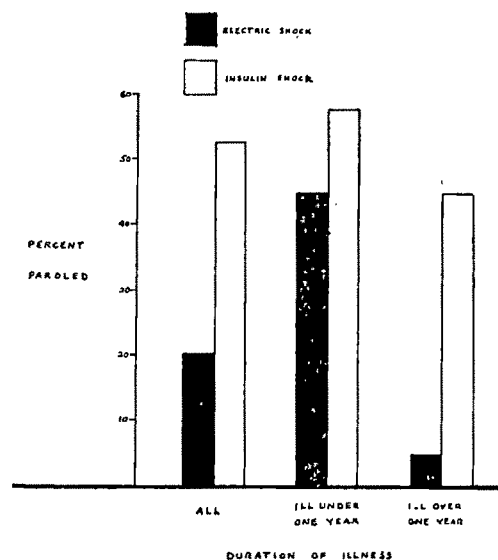


FIG. 1.

We may conclude from these results that, with the possible exception of the catatonics, the choice for schizophrenia is insulin-coma treatment. This is particularly true for patients ill more than one year. When these fail to respond to insulin therapy, further efforts with electroshock are generally palliative to the therapist and patient's relatives, rather than to the patient. It would seem worthwhile with catatonics—and possibly paranoids—who are ill less than a year, to resort to electroshock after insulin fails. At all events the results seem to indicate that until we have better criteria upon which to base our choice of treatment, insulin therapy should be tried first in all schizophrenics. The indiscriminate use of electroshock first (11), because it is easier to apply, wastes time which is an important factor determining the patient's ultimate response to insulin.

It is commonly reported in the literature that chronically disturbed schizophrenics are benefited by electroshock therapy. More exactly, it is held that such patients are at least more manageable after such treatment. For this reason we administered electroshock to 50 female patients from an outlying ward—one for the most disturbed patients in the hospital. These women had been ill from 2 to 10 years. They were first transferred to the shock therapy department and given an average of 16 treatments, after which they were returned to their former ward. Further observation was made by the doctor, nurses and attendants who had been familiar with their behavior before treatment. Six to twelve months later their opinions were recorded.

The descriptions fell roughly into 5 categories. First, patients who improved and continued to make a sufficiently good adjustment to warrant parole. There were 3 such cases. Second, those who improved a little for a short period, then became either worse or relapsed to their former state (11 cases). Third, those who appeared to be unchanged by the treatment (14 cases). Fourth, those who returned in a worse state, and remained so for several months before returning to their former level of behavior (7 cases). Fifth, those who seemed to become worse, and remain so indefinitely (15 cases).

The general impression that all the observers gained was by no means favorable. They felt that the bulk of patients became worse for shorter or longer periods, if not indefinitely, and described them as "more deteriorated," "more unreasonable," "more destructive and aggressive" and "more resistive and noisier." Those patients who began to eat after treatment seemed to "gorge" themselves.

The complications of electroshock therapy range from very mild to severe. Generally, headache, nausea and vertigo are immediate complaints. However, these are transitory. Amnesia usually occurs during a long course of therapy, and is ordinarily associated with confusion. Both are temporary, especially the latter, although occasionally we have seen clinical evidence of amnesia for four to six months after termination of treatment. Acutely excited patients often have memory

defects, particularly for the early events and symptoms of their illness, even after a spontaneous remission. Consequently in such cases it is difficult to tell whether the amnesia is due to repression or the organic effects of the electroshock itself.

In addition to the above rather accepted complications, dislocation of the mandible is most common. However, it is relatively minor. As a rule the jaw adjusts itself in the last stages of the seizure or can easily be replaced by the proper application of downward pressure to the lateral aspects of the rami. Fractures in this series of cases were uncommon. Roentgen examinations of the spine were done on all who complained of pain. It was necessary to x-ray 34 patients, but none was found to have a vertebral fracture. Some may have been missed in this procedure, but it is likely that very few if any occurred. However, the fact that these fractures are never serious makes routine x-ray series unnecessary. Further, the use of curare would seem unnecessary except where specifically indicated to "soften" the seizures. One undernourished patient suffered a fracture of the neck of the left femur, and 2 others sustained dislocations of the shoulder.

Fatalities occurred in 4 patients. The first died in a hyperpyretic state one week after a course of 14 treatments. Autopsy was not done. The second died after two treatments, and was found to have syphilis of the central nervous system, despite a negative serology. A third died after two treatments, and was found to have a silent brain tumor. These cases have been reported for the literature (3, 4). The fourth patient developed a volvulus two days after her fifth treatment and died quickly. While it should be said that not all these deaths were directly due to electroshock, they do indicate that in a large series of cases fatalities are to be expected for one reason or another. Advanced age and pre-existing organic brain disease are the most common findings in those so far reported in the literature.

DISCUSSION

The results of this survey indicate that electroshock may be seriously considered as an effective therapy in the management of

mental illness. However, they also indicate that the treatment has certain definite indications and limitations. It is not a panacea for all types of psychoses, no more than insulin-coma therapy is the answer for all cases of dementia præcox. Its indiscriminate use, therefore, would seem undesirable, except for purely investigational reasons.

Electroshock therapy is the choice of treatment for the involuntional and manic-depressive psychoses, or, broadly speaking, for the "affective" illnesses. It is, more exactly, as this survey shows, the elective treatment for the "middle-life" psychoses. In addition, it appears quite effective in cases of dementia præcox occurring for the first time in the late 30's and early 40's when a good affective reaction is present. In these latter cases one is usually a little undecided about the diagnosis, and symptoms strongly suggestive of involuntional psychosis are present.

Electrotherapy seems to have some merit in the general treatment of dementia præcox. It is most effective with the catatonic, less so with the paranoid type, and hardly so with the hebephrenic. In this category the duration-of-illness is extremely important, the therapeutic results declining in a startling manner with patients ill more than one year. This holds true for the catatonic type, as well as for the others.

Although the results with electric treatment in schizophrenics ill less than one year approach those for insulin-coma therapy, they are yet significantly lower in the above reported series. Further, it has yet to be shown that a representative series of præcöxes improved with electroshock remain well for as long a period as a similar series improved by insulin therapy. Judging from the essential nature of schizophrenia, it would seem that such a demonstration should be made before we even begin to seriously consider electroshock as a substitute for insulin-coma therapy.

At first glance, one suspects that the greater amount of time, energy and care given to an insulin-treated patient would fortify him more than the patient allotted the relatively less attention required in the course of electroshock treatment. One would therefore expect better and longer remissions with the former group. Such added

attention may help account for the markedly better results obtained with insulin in patients ill more than one year. One report (6) suggests that just such factors may be responsible for the fact that private patients make a better response to electroshock than do clinic cases. It may very well be that the basic nature of the insulin-treatment-situation answers a need in those sick a long time that enables them to improve, and thus accounts for the great discrepancy between the results for electric and insulin treatment in such cases. If this could be demonstrated more adequately it would prove the therapeutic importance of the human factor, and would indicate the need of patients, particularly præcöxes, for fellow human beings. It may be suggested that individuals who are drastically denied the comfort that comes from good relations with other people gradually are overcome and withdraw into a state of mind we term schizophrenia.

Outstanding is the fact that the treatment is beneficial in cases of short duration. This finding stands out with monotonous regularity. In considering electric treatment for a patient one is tempted to ask "how long" he is sick before determining any other fact, including the diagnosis. This is especially true for cases of schizophrenia, less so for the involuntional and manic-depressives. Although there are other prognostic criteria, none is as important as the duration. Gold and Chiarello (1) have made a valuable attempt to arrive at a more scientific choice of patients. However, even if a patient exhibits all of the criteria they describe for a good outcome, but does not have an illness of short duration the ultimate prognosis is poor. On the other hand, if a patient has been ill a short time the prognosis is good, despite the fact that other clinical features may not be present to forecast a promising result.

In another article (5) the writer has attempted an explanation of the importance of the duration-of-illness factor. Why should a schizophrenic who is ill less than one year respond so relatively well while another ill a longer time responds so poorly, if at all? Certainly we know of no organic reason. No structural changes appear with the progress of our "functional" illnesses to account for the discrepancy in results, and

one may question any statement that the treatments are effective solely because physiological changes are produced in the brain. We are hardly aware of what happens in the brain with electric treatment, and in the case of insulin-coma therapy no causal relation between the decreased cerebral metabolism and the therapeutic effects has been shown. On the other hand, one may ask, what is the psychological change that occurs in a treated case of short duration that allows him to improve? What causes such a fixity of the psychosis as time passes that we are left helpless to overcome it? It begins to appear to the writer that perhaps only certain personality-types respond to shock therapy, and that we have been following the wrong track by merely trying to prognosticate the value of treatment in each case on the basis of descriptive symptoms alone. Certainly the wide variety of "descriptive pictures" that respond well would automatically raise that point. What then is the nature of the personality or character-structure of the patients who do benefit? Would such information help us in understanding the etiology of psychoses, and aid in forestalling them by revealing possible prophylactic measures? If the psychoses are purely functional why do they respond so rapidly in the presence of physiological changes produced by "shock" therapy, and so slowly, if at all, to psychotherapy? It does not seem sufficient to say that such changes help the patient make a psychological adjustment? What are the intermediary steps? What, in other words, are the true dynamics that operate in the improvement?

As a general rule, it can be taken for granted that any schizophrenic who has been ill for well over a year will not respond to electroshock once he has failed to reach a state of remission with insulin-coma therapy. However, it is a fact that roughly one-third of those ill less than a year who have failed with insulin will be improved by electric shock. Even better results are obtained with catatonics so treated, but it must be remembered that this category responds well to electric treatment anyway. At any rate, why some few should do well with electroshock, having failed to improve with insulin, is a question for further investigation.

Weil and Moriarty's (11) advocacy of the indiscriminate use of electroshock first in *all* cases of schizophrenia is to be decried. More particularly their report indicates instead (1) that electroshock is without value in schizophrenics of long duration, whereas insulin therapy is, (2) that when electric treatment is unsuccessful in cases of short duration, subsequent insulin treatment is even more effective than it is in cases of long duration who have failed with electroshock.

While we have found several good prognostic criteria in judging patients for treatment, the results do not warrant a sanguine attitude. The results with electroshock, for instance, in the *choicest* type of schizophrenic show a 45% remission-rate. Are we justified in treating all of the patients, thereby subjecting them to a violent form of therapy whose full effects we have not yet adequately evaluated, in order to get less than half temporarily well? Indiscriminate treatment is not in the best scientific spirit. Keener and more discriminate choice of patients for treatment would now seem to be in order.

Courses of therapy which are extended beyond 12 to 15 treatments quite generally fail to produce a remission. This is the invariable experience with involuntaries and manic-depressives. Our results with the schizophrenics tell the same story and confirm the findings of others (8, 9, 11). Those *præcoces* who respond, do so quickly—though not quite as rapidly as the involuntaries—and stay well even with less than 12 to 15 treatments. However, when the therapy must be prolonged the outlook is poor indeed, and any improvement is short lived. This was our experience with insulin too. When a "remarkable" improvement occurs in a schizophrenic after 1 or 2 treatments with electroshock, the ultimate prognosis is poor. It usually takes 6 to 10 treatments to produce a change that maintains itself after a total of 12 to 15 treatments have been given. However, it is not always essential that 15 treatments be given after the initial improvement.

Insulin-coma therapy has also been applied in a rather fixed fashion. It is a common practice, for instance, in the New York state hospitals to aim for production of 50 or 60 comas in each and every patient, thus

giving as many as 100 treatments. Yet in 1938 Malzberg surveyed 1,039 cases treated in those same hospitals, and found (1) that the rate of improvement was highest in those receiving 20 to 29 injections, and progressively lower for those getting more treatment, and (2) that the rate of remission decreased as the number of induced comas increased. This was confirmed in our own survey(2). It would seem that the rigid application of a fixed number of treatments for *all* patients, regardless of their basic nature and reaction to treatment, leaves no room for the clinical acumen and judgment which are the essence of good psychiatric practice. Such a policy subjects innumerable patients to unneeded days of treatment and unnecessary risks. In this indiscriminate use of shock therapy lies a danger, rather than a boon, to psychiatry.

Our experience with electroshock in the treatment of chronically disturbed schizophrenics is not encouraging. More care seems to be required for the patients after treatment than before. The practice in some hospitals of giving disturbed patients one treatment a week over long periods in order to keep them manageable seems unwarranted and fraught with danger. The ill-effects we have noted have been similarly described by Nussbaum(9), and have led to an essentially conservative approach, so well advocated by Rosen and his co-workers(10).

In cases of short duration, too, we have gained the definite clinical impression—confirmed by others of our hospital staff—that some patients who fail to get well are done irreparable injury. They seem to make down-grade progress more rapidly than is usual with untreated cases. When such effects are observed it becomes more desirable than ever that we discover newer and better criteria for the shock treatment of schizophrenics. The urgent need at present is not so much for *newer* modes of treatment, but for an *improved choice* of patients with our present methods, so that failures and deleterious effects can be more

generally avoided. With a better ability to choose our patients for treatment the discovery of newer techniques will automatically lead to better results.

Shock therapy has been, and continues to be applied on a purely empirical basis. There is no known rationale for its use. The etiology of the diseases we treat is obscure, and the causal connection between the effects we produce and the results we obtain is hardly clear. Under such conditions humility would seem to be in order, caution a virtue, objectivity a worthy goal, and further investigation an urgent necessity.

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COMPLICATIONS IN ELECTRIC SHOCK THERAPY¹

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The complications arising in the course of electro-convulsive therapy fall into three general categories: (i) those due to the action of current on brain tissues; (ii) those referable to the neuronal discharge occasioned by the current, and (iii) those appearing in the skeletal and cardiorespiratory systems as by-products of the convulsion.

COMPLICATIONS DUE TO THE ACTION OF CURRENT ON BRAIN TISSUE

The nature and duration of a current, and the resistance of the tissues traversed, are of first importance to the effect produced. The impedance offered by the head to the passage of an alternating current is a function of many variables: the nature, form and application of the electrodes, the frequency of the current, and the relative impedance of the integument and of deeper structures.

Between electrodes applied bi-temporally the lines of force representing the current density probably follow a fusiform pattern (Jaffe(1); Sulzbach, Tillotson, Guillemin and Sutherland(2); Alexander and Lowenbach(3)). The exact configuration of this spindle is a function of the current frequency, wave form, and intensity at the points of electrode contact.

After an electric shock just strong enough to produce convulsion in the cat, Moore(4) found no hemorrhages such as appeared (in the current path, not scattered through the brain) following his application of stronger currents. In the experiments of Morrison, Weeks and Cobb(5) on cats, rabbits and guinea pigs, alternating current produced constriction of pial vessels, slowing of blood flow, and shrinkage of the ganglion cells;

edema, congestion and hemorrhages were found. Also in Langworthy's(6) rats, alternating current commonly produced central nervous system hemorrhages. These were attributed either to the marked venous congestion occurring with the shock, or to the sharp rise in blood pressure immediately following.

From numerous reports in the literature we quote three typical examples of animal experiments expressly designed to simulate the conditions that obtain in the electric shock therapy of human subjects. Lidbeck(7) administered 14 to 16 shocks to 3 dogs and found minimal effects: a single perivascular hemorrhage and capillary thrombi in 1 animal, shrinkage and ischemia of ganglion cells near the site of electrodes in the other 2. A series of 15 cats reported by Alpers and Hughes(8) sustained more damage: subarachnoid hemorrhage in 10, hemorrhage of the brain in 8 (7 punctate, 1 more extensive). Neuburger, Whitehead, Rutledge and Ebaugh(9) shocked dogs at 3- to 5-day intervals, using 80 volts, 200 milliamperes, and a 0.15 second duration. They found paling, swelling, tigrolysis and vacuolation of the nerve cells, most pronounced in the cortex along the current pathway; glia and microglia revealed slight proliferation. In some brains the meninges, cortex and periventricular areas showed vascular dilatation and minute hemorrhages, but the commoner pathological changes were regarded as reversible.

In human subjects following electric shock therapy, histopathologic findings have been reported after necropsy in a few instances. Lesions similar to those cited above from the experimental work of Neuburger and associates, were reported by Ebaugh, Barnacle and Neuburger(10). Their cases were two 57-year-old patients: one died 1½ hours after the 12th grand mal; the other, immediately after the 1st grand mal which was produced

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by the 3d shock. The brains of these patients showed diffuse shrinkage and ischemic degeneration of cortical nerve cells, especially over the tops of the convolutions, with several small areas of destruction of blood vessels; there was proliferation of all glial elements, astrocytes being increased in the upper and deeper cortical layers. The changes were slightly more marked in the pathway of the current, but not limited thereto. The reporters stated that the lesions were not serious, that many were reversible, and that they were due to the electric shock therapy and its convulsive seizures.

In one of two necropsies reported by Alpers and Hughes(11) a 45-year-old patient, who died 2 months after receiving 62 shock treatments, had many punctate hemorrhages of various ages as well as foci of perivascular edema and necrosis in the cerebral cortex, cerebellum, basal ganglia and medulla. Also present were bronchopneumonia, marked fatty degeneration of the liver, cholecystitis and cholelithiasis. Their 2d patient was one with advanced arteriosclerosis who died at the age of 79, five months after the last of 6 electric shocks. In this instance there were found, chiefly in the white matter, scattered areas of old perivascular hemorrhage, gliosis, fibrosis and rarefaction. Again the cerebral findings were attributed directly to the effects of electroshock.

COMPLICATIONS REFERABLE TO THE NEURONAL DISCHARGE; ELECTROENCEPHALOGRAPHY

While a convulsion consequent to discharge of the pyramidal motor neurons is the predominant feature of the therapy, evidence abounds that other cellular structures may be excessively stimulated or impaired. Thus, Urquhart(12) offered evidence of possible effects of electroshock at the autonomic level. Currents passed between the nasal cavity and the atlanto-occipital ligament of rabbits stimulated the vagus center and consequently slowed the heart, unless the inhibitory fibers were controlled by atropin. Excitation of medullary centers was succeeded by their profound inhibition for a period following the breaking of the current.

It is not unreasonable (Jetter(13)) to as-

sume that rarely the cardiac and vasomotor nervous control in man may be irritable enough to bring about sudden death after transcerebral stimulation by a relatively weak current, without any pre-existing cardiovascular disease.

An exceptional response of the vegetative system to cerebral shocking is postulated by Nussbaum(14) to explain the death of a 42-year-old schizophrenic after 60 electroshocks, many of which had given petit mal responses. Immediately following the course she was in fairly good condition, but lost weight rapidly to a point of severe emaciation, suffered from abscesses, and developed trophic changes of fingers and toes; death occurred 2 months after therapy ended.

A shock-induced seizure is exceptionally followed by status epilepticus. Mechanisms aroused by the current have failed to halt as usual, and shock therapy must be discontinued. The added response of a center not ordinarily reacting to shock currents could account for Gralnick's(15) case of post-shock status complicated by fatal hyperpyrexia.

A picture of manic delirium, which may terminate fatally, has been described by Bingel(16), and Kris(17), in certain cases of catatonic dementia præcox.

Cortical or subcortical organic effects may be correlated with the changes generally seen in the emotional response of depressed patients. Indirectly these changes may introduce a danger of the depressed becoming more prone to self-destruction. Some patients resist shocking and will elope.

Reversible or irreversible central nervous system changes must accompany the amnesia characteristic of the usual shock-induced organic syndrome (Kalinowsky(18)). Myerson(19) submits that amnesias may reflect swelling, or punctate hemorrhages. Most investigators (*e. g.*, Smith, Hastings and Hughes(20); Levy, Serota and Grinker(21)), report that memory impairments are restored in from a few weeks to 9 months. Their duration and severity vary with the number of electroshocks given.

The nearest approach to measuring changes in the brain is by electroencephalography. Pacella, Barrera and Kalinowsky(22) found that the intensity and duration of electroencephalographic abnormalities

were related directly to the number of electric shocks administered. Patients subjected to a series of from 7 to 12 convulsions showed records in which all abnormally slow waves disappeared after 1 to 3 months. In 70 percent of patients who had had 13 to 22 convulsions, the abnormally slow waves disappeared 2 to 6 months after termination of therapy; in the others, slow potentials still persisted at the end of 6 months. These authors commented that while the electroencephalographic abnormalities are largely reversible, this does not necessarily mean that any cellular changes are correspondingly reversible.

In this clinic the EEG signs of abnormality have developed generally between the 5th and 10th grand mal. They have been of the most varied nature, from a slight slowing and an increase in amplitude to a diffusely disorganized pattern with sharp and slow waves appearing at random under all leads. These disturbances have tended to disappear within a month after the last treatment.

COMPLICATIONS DUE TO THE CONVULSION: SKELETAL; CARDIAC, ALSO WITH CURARE; PULMONARY

Long bones are seldom fractured by the convulsion; compression fractures of vertebral bodies are common. Fracture rates for the humerus range from Taylor's (23) 0.26 percent in 1133 cases, to Evans' (24) 4.0 percent in 50 cases over the age of 50. Femur, acetabulum, scapula, ribs and vertebral processes are rarely fractured.

The greatest variation exists among reports of compression fractures of vertebral bodies. Taylor found 0.5 percent, X-raying only the few patients who complained of post-shock back pains. Horwitz (25) X-rayed every patient after his shock course and found a 20 percent rate.

In the first 252 electroshock cases at this Facility, any complaint of back pain was followed up by a spinal X-ray; 13 cases, or 5.2 percent, showed one or more vertebral-body compressions. Shocking was then discontinued. This practice may be unwise, since some patients with compressed fracture, which tends to occur early in a course of convulsive therapy, are evidently going

through their treatments without complaints. "Silent" compressions will not appear in statistics unless every spine is X-rayed after a course. If compressions generally are as common as in Horwitz' 20 percent of all cases, then in this clinic and elsewhere there will be up to 15 percent of undetected asymptomatic compression fractures in addition to the 5 percent detected because of symptoms.

Worthing and Kalinowsky (26) followed up 8 cases, 2 years after severe compressions had been shown by X-ray, without finding anything of consequence by radiologic, orthopedic or neurologic examination. Neuropsychiatrists seem to agree that electroshock-induced spinal compression fractures have no clinical significance, offer no threat to the spinal cord, and do not interfere with heavy muscular effort.

Dislocations of the mandible were mentioned in the earlier reports. Better technique in holding the jaw seems practically to have eliminated this complication. A more troublesome though rarer accident has occasionally been seen in forward dislocation at the shoulder. Although some operators obviate this by applying strong manual pressure backward over the head of the humerus, this pressure may also increase the risk of humeral fracture.

The profound changes in the general circulation that accompany grand mal, together with the latter's violent muscular exertion, put a strain on the heart that can prove dangerous in the presence of any weakness, especially liability to coronary complications. Two cases of Jetter's (13) are illustrative. Advanced coronary arteriosclerosis was found in a patient 61 years old, who died a few minutes after his 8th convulsion. A 23-year-old man died several hours after the 8th convulsion of a second course, from rapidly progressing heart failure; he was found to have an acute myocarditis and acute glomerulonephritis. Delayed circulatory failure accounted for a death reported by Gralnick (15); this seemed due proximately to asphyxia in the presence of acute edema of the lungs, and brain, 2 days after the 2d convulsive treatment of a 35-year-old man.

At this hospital we observed several shock-treated patients with a mild or moderate arterial hypertension that tended, while varying, to show net increments from week to

week or from shock to shock. All these patients had exhibited a clinical picture, an electrocardiogram, and a heart X-ray (when this had been taken) close enough to "normal" to permit the undertaking of shock therapy. Several courses had to be stopped before their anticipated conclusion, because of alarming rises in systolic and diastolic pressure.

The question of whether cardiac damage was caused by the shocking was raised in only one of our hypertensives. This 48-year-old schizophrenic completed one course without accident, and with some benefit psychiatrically. Relapsing later, he was given a second course, also unmarked by complications. His pressure remained moderately elevated, 150/90 to 160/100 (after the final shock it had risen momentarily from a pre-shock of 160/100 to a post-shock reading of 220/130). He died of coronary occlusion 4 months later. No one ascribed this death to shock therapy, but some remote causal connection is not beyond possibility.

Curare has been used to mitigate the severity of convulsions, particularly in the poorer cardiac risks. While it does remove the load imposed on the heart by violent muscular activity, in some other manner it may raise the chances of heart failure. In a detailed study of blood pressure, pulse and respiratory phenomena accompanying curare-protected convulsive shock, Woolley (27) noted great variability in circulatory and respiratory reactions, sometimes of extreme degree during and subsequent to the seizure. Sharp fluctuations occur also without curare; but the observation that severe drops in blood pressure, pulse and respiration were promptly controlled by the administration of prostigmin or adrenalin suggested that curare played an important rôle in producing them.

Deaths have resulted from the use of curare. Cash and Hoekstra (28) reported one in a 47-year-old man 2 hours after the 5th curare-modified grand mal, with the subsequent finding of marked coronary sclerosis but no myocardial involvement. Ziskind and Ziskind (29) reported that of a 50-year-old patient with a history of hypotension, pulse irregularity and cyanosis, who died one day after the 2d electric shock with curare. It is not yet clear whether curare adds more hazards than it subtracts.

Pulmonary vulnerability is an established fact in electric shock therapeutics. Inactive tuberculosis has been activated (Hemphill (30) and others). Pneumonia and lung abscess, both in part probably consequent to accidents of aspiration, seem to occur oftener than expected. Evans reported an instance of pneumonia beginning 2 days after a shock treatment and ending fatally 36 hours later, although he did not charge this complication to the therapy. In an unreported case, symptoms of broncho-pneumonia began 10 or 12 days after, and ended fatally 2½ weeks after a shock course; similarly this death was not ascribed to the therapy. In one of our cases, symptoms diagnosed as those of pulmonary abscess appeared a month after the course was ended. This clear interval seemed too long to allow connecting the abscess with the treatment, although it could have been construed as a complication.

Reluctance to connect pulmonary or other accidents with the therapeutic program has probably contributed to its low mortality rate. Jetter (13) noted 1.2 deaths per thousand in 2500 cases; the comprehensive report of Kolb and Vogel (31), only 0.5 per thousand in 7200.

SUMMARY

Therapeutic electric shocks produce some reversible cortical changes, probably together with some irreversible neuronal degeneration and gliosis. The typical memory losses are generally recoverable, and the diversified EEG disturbances tend to disappear in several months.

According to reports in the literature, the neuronal discharge may have other effects than the intended grand mal: cardiac arrest, autonomic disorders, status epilepticus, or manic delirium.

Regardless of operating technique, reported rate of compression fracture of a vertebral body vary from 0.5 percent of cases, to 20 percent with routine X-raying. Many compressions will remain undiscovered unless spines are routinely X-rayed post-shock. Compression spinal fractures are clinically inconsequential. The humerus, or more rarely some other bony structure, is occasionally fractured; to these instances the technique of shocking seems relevant.

Dislocation at the shoulder or mandibular joint should be technically preventable.

Arterial hypertension may be aggravated by electroshock, and myocardial insufficiencies can lead to a fatal outcome. Curare attenuates the convulsive violence but may add new dangers; its drawbacks are still under scrutiny.

Aspiration during the coma has been deemed responsible for complicating lung abscesses. Liability to pulmonary complications probably has other unknown causes. Post-shock pneumonias have not always been charged to the therapy. The published mortality rates appear over-optimistic.

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DISAPPEARANCE OF PAINFUL PHANTOM LIMBS AFTER ELECTRIC SHOCK TREATMENT¹

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The treatment of the phantom limb syndrome has generally represented a problem of major proportions. Most forms of therapy have had little effect on the abolition of the painful concomitants of the phantom limb. Both medical and surgical procedures, such as repair of the stump, removal of a neuroma, spinal anesthesia, rhizotomy, chordotomy, sympathectomy, injection of alcohol or of a solution of procaine hydrochloride either into the nerves or into the neuroma or into the thoracic sympathetic ganglion, x-ray therapy of the spinal cord or spinal nerve roots, and physical therapy to the stump, have proven to be of variable and unpredictable value. White(1) recently concluded that some of these procedures may be decidedly harmful. He also cites the fact that Van Wagenen recently treated a patient who had endured forty-five operations for chronic osteomyelitis and had finally lost a leg through amputation; the severe phantom limb pain which was present yielded to bilateral frontal lobotomy. The success of de Gutierrez-Mahoney(2) in the treatment of a painful phantom limb through resection of the postcentral cortex is also noteworthy. This author noted that a patient with a painful phantom limb experienced a remission in his symptoms after a convulsive seizure. This interesting clinical finding served as the basis for our present research. The use of electric shock therapy suggested itself as a method for the controlled administration of a convulsive seizure to produce the effect, more protracted if possible, which de Gutierrez-Mahoney had observed.

CASE REPORT(3)

Patient is a 55-year-old white male who was employed as a brakeman and fell from a moving train in 1939. Both legs were badly mangled and

infection set in so that repeated painful operations had to be performed, which eventuated in the amputation of both legs below the knees. A psychosis of the involuntal melancholia type was precipitated by this accident. He was depressed, harbored ideas of self-destruction, and was agitated, irritable and emotionally unstable. He continually complained of pain in both feet of the missing legs. Although the amputations had been at a level below the knees, he felt as though the toes and heels itched and the soles of the feet burned; occasionally the feet felt hot and cold, as they did in years gone by when, as a brakeman, he had been exposed to the cold and had often frozen both feet. These pains constantly recurred and caused him much discomfort and pain, so that he thrashed about in bed, cursed and expressed a wish to die.

Occasionally, while lying in bed, he had choreatic jerkings of both legs, which he could not control. The stumps were generally painful, but he could walk about on them during an attack-free period. Neuromata were never palpated. He refused to wear artificial limbs, because he claimed they would hurt him too much. His prepsychotic history indicated that for years he was nervous and maladjusted.

On July 11, 1944, electric shock treatment was instituted but he had his first good grand mal seizure on July 15, 1944, during his second treatment. On August 7, 1944, when he was questioned, the sensation of the phantom limb was still present. However, on August 9, 1944, a marked change in his personality was noted and for the first time in years the patient smiled, he was euphoric and asked for his artificial limbs. He now admitted that the phantom limb had disappeared but he had not been conscious and aware of its disappearance. At that time he had experienced seven good grand mal seizures. Patient now presented a fairly marked hypomanic reaction and exhibited an unusual exuberance and an elevation of mood. His self-recriminations, agitation and suicidal ruminations all had disappeared, and he became less sensitive to noises; whereas previously he had cursed loudly when he heard music or the news over the radio, he actively went over to the radio to listen to it. He also displayed an interest in the other patients and for the first time in five years he wrote a letter home. Of the phantom limb, there remained only a painless "drawing," particularly located in both popliteal spaces, which responded partly to whirlpool baths. There was no evidence of the choreatic jerkings which had been a prominent aspect of the previous syndrome. The itching and burning sensations had also subsided. Now a year after the institution of treatment, he has

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been able to wear artificial limbs, which he previously rejected vehemently because of the unbearable pain, but now he hardly has any complaints.

DISCUSSION

It is a matter of common knowledge that electric shock therapy is beneficial in the treatment of the affective psychoses, particularly of involuntional melancholia. Kalinowsky (4) and others have noted high rates of improvement, up to 86% of their cases. The improvement in the emotional response in our patient was not as remarkable as the disappearance of the painful phantom limb. This phenomenon has hardly been reported previously. It is not obvious how the few convulsions produced a cessation of pain, but the opinion has recently been expressed that a "convulsion extinguishes all functions which find expression as personality, and in the immediate postconvulsive state the vegetative processes only continue." A memory defect of varying intensity and varying duration lasting from hours to months frequently follows, associated with a mitigation of the psychotic symptoms, but it can hardly be surmised that the disappearance of the phantom limb could necessarily be explained on a mnemonic basis. It may be true that a good deal of time may elapse after a convulsion before the reintegration of neurological and psychological functions, including the reestablishing of cognitive, expressive and associative abilities. The concept, not entirely proven, that electric shock treatment produces cortical damage cannot be entirely accepted in view of the fact that disturbed paretics with definite organic cerebral pathology have manifested improvement after electric shock treatment. Selinski (5) relates improvement in electric shock therapy to changes in the oxygen-carbon dioxide ratio, changes in the vascularity of various brain areas, changes in blood pressure, velocity of blood flow, changes in the chemical contents of the blood and changes in the cellular structure of the cerebral cortex as manifested by the changes in the electroencephalogram. This author also believes that electric shock jars the apathy or inertia which prevents the individual from facing reality. It is also his opinion that the "improvement is related to changes in feeling tone which includes mood, quality of perception, attitude toward self and

attitude toward the world, and awareness of capacity to feel the ability to do things." It must be conceded that in all these respects our case manifested improvement.

Strictly speaking a definite cerebral localization for the phenomenon of the phantom limb has not been completely established. Many authors believe that peripheral factors outweigh the central in importance. Nevertheless, Head and Holmes (6), Riddoch (7) and Gerstmann (8) predicate that the phantom limb is related to the sensory function of the parietal cortex. Head and Holmes observed the disappearance of a post-amputation phantom foot following a lesion of the opposite parietal cortex. In this connection, the neurosurgical innovation of Mahoney (2) is worthy of more detailed mention. This was based particularly on the study of a case of a man who had injured several fingers of the right hand and an extremely painful phantom limb appeared. The patient also suffered a partial paralysis on the right side, but there was no change in the phantom limb. He later experienced a few convulsions and in the post-convulsive period the phantom limb pain disappeared for a day but it returned. After a subpial resection of the contralateral postcentral cortex corresponding to the missing appendages, the phantom limb and the pain disappeared completely. This work seemingly confirms the original observation of Head and points to a cortical projection for the phantom limb manifestations. The time is not yet at hand for conclusions to be drawn on the effects of electric shock on the function of the post-central sensory cortex or the parietal lobe.

There are some who believe that psychosurgery as represented by frontal lobotomy and electric shock therapy produce "blanching of the emotional coloring connected with obsessive ideas, relief of tension and certain unpleasant organic side effects, such as unrestrained behavior and impaired judgment." If this be accepted as a *modus operandi* for these two forms of treatment then their application to the elimination of the painful phantom limb is a logical one.

Randall, Ewalt and Blair (9), who recently studied the psychiatric reaction to amputations suffered by 100 men in the service conclude that the "individual's total reaction

to injury and his adjustment to it are of greater importance to his future usefulness and comfort than any sensations that seem to come from his missing member." These authors are to be commended for this attitude, but they also indicate that there was a high incidence of psychopathologic conditions in their group, and although 95% had phantom limb sensations only one was painful. It must be borne in mind that they studied early reactions to the loss of a limb before the individuals had attempted an economic or social adjustment. These facts are significant because those who have sought treatment have been considered neurotics, many of whom reputedly belong to the obsessive type. With the presence of numerous psychopathologic determinants in the early stages of their readjustment, it may be predicted that depressive and other trends would appear together with a more disturbing form of the painful phantom limb. Particularly in those cases where the psychotic level would be reached, the application of electric shock therapy might be indicated.

At times it has appeared that the "burning and itching" experienced by our patient was actually causalgic in type and that a painful phantom limb actually was a phantom limb with a superimposed causalgic component. Special attention was not paid to the temperature and skin characteristics of the patient's stumps. He was able to use them to get about in his relatively rare symptom free moments and the stumps were "callused." Inasmuch as de Takats(10) recognizes a peripheral and a cortical sensory level for the causalgic state, then in the treatment, the cortical level must also be considered. In this regard it is interesting to note that after the completion of the electric shock treatment the patient no longer noted the "burning and itching" or the causalgic element; the "drawing" which remained might be accepted as a causalgic residual.

Of practical importance is the fact that after a period of more than five years during which the thought of artificial limbs would make the patient yell with fear and would recall painful memories of the discomfort endured when soon after his stumps finally healed he had attempted to use artificial legs

and had rejected them vehemently because of the painful phantom limbs, he was now able to walk about with comfort. The uplift to his morale was considerable when he finally did use his "limbs." His improvement has continued now for over a year and although his hypomanic reaction has levelled off a little, he is still very enthusiastic.

Specifically this form of treatment would be recommended in selected cases, only where markedly depressive trends and suicidal tendencies would accompany an especially painful phantom limb, and where other forms of treatment had proven ineffectual. Furthermore, all the physical prerequisites for electric shock treatment would have to be met.

SUMMARY

A 55-year-old male with an involutional psychosis precipitated by the traumatic loss of both legs with very painful phantom limbs was treated with electric shock. An improvement in the psychosis and a disappearance of the painful phantom limbs resulted. The mechanisms involved were discussed and relations to the causalgic state intimated.

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EXPERIENCES WITH THE PHARMACOLOGIC SHOCK THERAPIES IN THE "PSYCHOSES" IN MILITARY PERSONNEL

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The use of shock treatments for psychoses in the European theater of operations was first authorized in 1943. The present report deals with our experiences with cases treated with either electroshock or insulin shock. We are making no attempt to review the vast literature which has been done elsewhere (Tennent 1944; Cook 1944).

Case Material.—The case material consisted of patients received before the beginning of active combat in France. Few of the original group had seen combat in Africa or Sicily, and as a group they were considered as garrison soldiers. The cases were chosen for treatment without regard for the duration of military service, but rather with a view to obtaining improvement in their mental condition. The authors are conscious of the fact that the diagnoses in these patients were principally based on their presenting picture when seen at this hospital, and that they sometimes differed from the schizophrenic patients seen in civil practice. The following case histories are presented to exemplify these variations:

CASE 1.—The soldier was a 23-year-old white male with 2 years of military service. He was first admitted to a hospital with complaints of epigastric distress, fatigue and fears about the state of his health. He had been discharged from another hospital a few days before, but there was no record of his diagnosis at that hospital. A complete medical workup revealed no organic basis for his complaints. The patient continued to complain and, although he was treated with psychotherapy and hypnosis, did not improve. Eight days after admission, he made some superficial cuts on his wrist with a razor and was transferred to this installation. On admission here, he was fearful of dying, thought that other patients were talking about him, and that they could control his mind. He stated that he was doing more harm than good in the world and wanted to kill himself. There were numerous somatic delusions, including the feeling that his skin "smelled dead," and that when he thought of the devil he felt a flush of heat over the skin. His insight and judgment were poor, and he was classified as a dementia præcox, paranoid type.

Case 1 exemplifies two common characteristics of this group. The initial history received from other hospitals was that of an anxiety neurosis which rapidly progressed to a psychotic-like picture, in this case, over an 8-day period. In many instances there was a history of a prepsychotic personality of the schizoid type, but there was an appreciable number who did not have such personalities. During the phase of psychotic-like behaviour, the somatic complaints which initiated the episode disappeared. A small number demonstrated a similar onset which arose while the patient was in combat in Africa or Sicily. In case 2, the neurotic episode was classified as a traumatic neurosis:

CASE 2.—The patient was a 30-year-old white male serving in the paratroopers. He was in combat in Africa and Sicily, and first complained of various somatic complaints on December 6, 1943. He felt jumpy, his ears rang when he ate, he had frontal headaches, a crushing feeling in his chest, abdominal distress and constipation. He was in action soon after and was knocked out by a nearby explosion. He was then seen in a battalion dispensary where he had the same complaints and was diagnosed as a traumatic neurosis. On December 18 he was transferred to a general hospital where he was confused, and complained that charges of electricity were placed in his body. He also felt that he was a prisoner, that other patients talked about him, that an officer was a German in disguise, and that his cigarettes were drugged. He was evacuated to England through several hospitals, and when he was seen in this hospital in February, he was severely blocked, expressed the same paranoid ideas and bizarre somatic delusions. He had no gastrointestinal complaints or head pains.

This patient demonstrated the common finding that, unlike the neurotic picture, the psychotic-like picture usually remained fixed when it appeared. In the cases which responded to therapy with a disappearance of the psychotic symptoms, there was no recurrence of the neurotic complaints. Miller (1940) described a similar experience in civil practice. In his cases there was an initial

appearance of a neurotic pattern followed by the psychotic symptoms. When the latter disappeared during psychoanalytic therapy, the neurosis did not recur. A large number of our patients showed a considerable disturbance of their affect associated with undoubted schizophrenic symptoms. Case 3 is typical of this group.

CASE 3.—The patient was admitted to the hospital on December 22 with a diagnosis of chronic urethritis. He was treated medically and first began to show mental symptoms on January 18. He was found lying in bed, extremely restless and jerking his body spasmodically and aimlessly. He was confused, incoherent, irrational and had sudden outbursts of violent activity. He kept repeating, "Repeat three words after me, I love you," and "put a thermometer in my mouth. That will tell you how I am." He was transferred to this hospital and, on admission, was found to stutter markedly, was easily excited, and thought that other men were taking advantage of him. A few days later, he was found grimacing, smiling and constantly talking in either a stage whisper or a shout. At one time he took off his clothes and began to dance about and then suddenly began to curse and laugh. He failed to answer direct questions correctly, and could not concentrate on the simplest problems. He did not recognize this installation as a hospital, or the examiner as a medical officer. He was amenable to suggestion most of the time, but had episodes of violent homicidal behaviour.

In this patient the onset of his maniacal behaviour was sudden and he failed to improve with routine care. The disorder of his affect was the principal symptom, but the ideational content expressed was entirely bizarre and dissociated from reality. Bleuler (1923) and Cobb (1941) have described cases with similar mixtures of schizoid and affective symptoms in civil life, and we have observed a fairly high percentage of these mixed cases. Ordinarily, we have classified them as dementia præcox unless there was some history of prepsychotic cyclothymic behaviour and other symptoms of an affective disorder.

In summary, the following differences have been noted between the patients seen in civil practice and some of those found in the military personnel. (1) The schizophrenic picture was often preceded by an initial neurotic behaviour pattern precipitated by some situational change such as combat, leaving the U.S., etc. (2) The full-blown appearance of the dementia præcox came on in a relatively short time, usually a

matter of a few weeks. There were very few cases which gave a history of a slow, insidious onset of symptoms over a period of years. (3) Many cases not included in this report showed a sudden complete remission from symptoms which might occur practically overnight after the symptoms had been present for weeks or months. (4) There were many cases with a proven duration of only a few weeks who presented symptoms which are ordinarily regarded as indicating deterioration. They were extremely untidy, urinated and defecated in their clothes, and almost resembled a complete amentia in the depth of their regression. These so-called deterioration signs had no significance for the prognosis with treatment. (5) The clinical material in this group often had a disorder of affect associated with the schizoid symptoms. They were usually classified as dementia præcox, and the diagnosis of manic-depressive psychosis was reserved for those cases which gave a good history of previous cyclothymic behaviour and other affective symptoms.

The age distribution ranged from 18 to 40. The patients were uniformly in good physical health, and even minor defects of the heart, lungs, skull or spinal column were sufficient to exclude a patient from treatment. The large bulk of the cases were in service from 1 to 2 years, and the range was from less than 1 year up to 16 years. Approximately 95% of the cases were enlisted men, and the remainder officer personnel. There was no significant difference between their military rank and that of 300 consecutive neurotics passing through the hospital.

Indications for Treatment.—The choice of electroshock (ECT) or insulin depended on a number of factors. ECT was recommended in the following groups: (1) manic-depressive psychosis with prominent affect disorders; (2) schizophrenics with large component of affect disorder; (3) many patients diagnosed as dementia præcox were treated with ECT because of a lack of sufficient personnel to give insulin shock treatment; and (4) the acutely disturbed dementia præcox patients were often treated with 2 to 4 electric shocks which lessened the disturbed behaviour and made them more amenable to insulin shock treatment which was

then instituted. Insulin shock as a rule was recommended for dementia præcox. If time permitted, those who were complete failures with insulin were treated with ECT, and vice-versa. Frequently improvement would be obtained.

The usual case required either 10 ECT shocks or 20 insulin comas to produce a remission. We have felt that therapy should be continued as long as the patient showed improvement, and we have given either 2 ECT shocks or 5 insulin comas, after they had reached their maximum improvement. If there was no remission with 10 ECT shocks or 20 insulin comas, treatment was usually terminated. A number of cases were incompletely treated because they were prematurely evacuated to the United States. These cases are not included in this report.

Technique.—The electroshock was induced with an Ediswan machine which was regulated to deliver 250 milliamperes, at voltage ranging from 60 to 150, and the time ranged up to 1 second. The usual dosage was between 100 and 140 volts, and the time varied from 0.1 to 0.3 second. The technique of holding the patient to prevent fracture of the vertebra was manual restraint in which the patient was placed on a flat table with a small sandbag under the dorsolumbar junction, and manual pressure was exerted on the pelvic and shoulder girdles to maintain the opisthotonus. X-ray examination of two series of 81 and 61 consecutive cases after treatment failed to show any evidence of spinal fracture. A small amount of curare was made available to us through the kindness of Squibb and Company. The curare was administered according to the technique of Bennet (1940). It was used as a premedication in three cases in which it was essential to "soften" the seizure. These were psychotics in which the following complications existed: (1) chronic dislocation of the jaw; (2) recent fracture of the wrist; and (3) recently sutured wrist tendons due to a suicidal attempt. In each of these cases, the treatment with ECT was successfully completed without incident.

It is generally agreed that the efficacy of the insulin shock therapy is dependent on the number of comas and the duration of the coma. In the present group, the factor of time was important because of the necessity

to evacuate them to the Zone of the Interior. The technique used therefore was that described by one of us (Goldfarb, 1943), in which the insulin was administered in divided doses. Insulin was administered intramuscularly in half of the cases, and intravenously in the remainder. The average time required to produce the first coma was 6 days with the intramuscular route and 4 days with the intravenous.

The blood sugar curves of 2 patients treated with the intravenous insulin are presented in Fig. 1. The dosages were increased daily (Goldfarb, 1943), the first dose being 60 units in 5 portions, followed by an increase of 50 units daily. The onset of coma is indicated by the arrow. It may be seen that the patients uniformly reached the hypoglycemic level on the first day of treatment but that there was a spontaneous rise of the blood sugar after about 2 hours of hypoglycemia. From the curves it is apparent that coma supervened after the blood sugar had been maintained at low levels for more than 2 hours.

In half of the cases treated with insulin, each coma was terminated with 600 cc. of 25% glucose per os. The patients were routinely given 5 mg. of thiamine daily to obviate the onset of vitamin B deficiency symptoms (Goldfarb-Bowman, 1941). In the latter half of the cases, when ample quantities of intravenous glucose became available, the coma was terminated with 40 cc. of 50% glucose intravenously, followed by a feeding of grain cereal by mouth. Despite the frequent intravenous punctures for the administration of insulin and particularly the glucose solutions, we have had no cases of sclerosed veins. We believe the following technique of venapuncture accounted for the fact that this complication was not encountered. The veins in the anticubital fossa were punctured while the arm was at the same level as the heart, and after the termination of the injection, the arm was immediately elevated to the erect position. It was found that in cases who did not strain and struggle, the puncture wound healed without requiring pressure over the wound. The lumen of the vein remained widely patent and the concentration of glucose at the site of the puncture was not high enough to set up a local phlebitis. The physiological principle of cir-

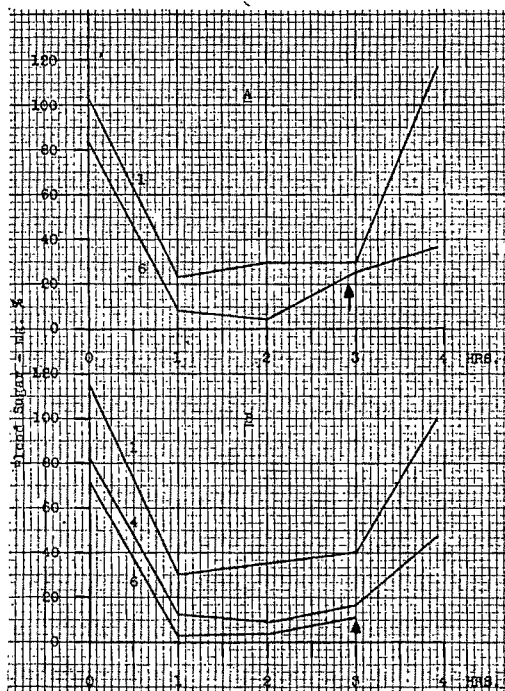


FIG. 1.—Blood sugar curves following insulin intravenously. Dosage: Patient A; Curve 1—60 units; curve 6—310 units; Patient B; curve 1—60 units; curve 4—210 units; curve 6—310 units.

culation which permitted this technique is shown in Fig. 2. When the arm was at the level of the heart, the venous pressure approximated 10 cm. of water higher than atmospheric pressure. Elevation of the arm brought the site of the puncture wound about 30 cm. higher than the heart, and the venous pressure fell to approximately 20 cm. of water below the atmosphere. There was no perivascular leakage of blood and the wound healed without requiring stagnation of the venous blood with its high local concentration of glucose.

Results and Complications.—The classification of the results of therapy presented many problems because there was no opportunity for a follow-up after the patient left this installation. With this limitation in mind, we have classified the results in the following categories: (1) a patient was considered to have made a complete remission if all the signs and symptoms of the psychosis had disappeared and he had achieved a good insight into the character of his illness; (2) if the patient improved either in his symptomatology, general behaviour on the ward, or gained some insight into his illness, but

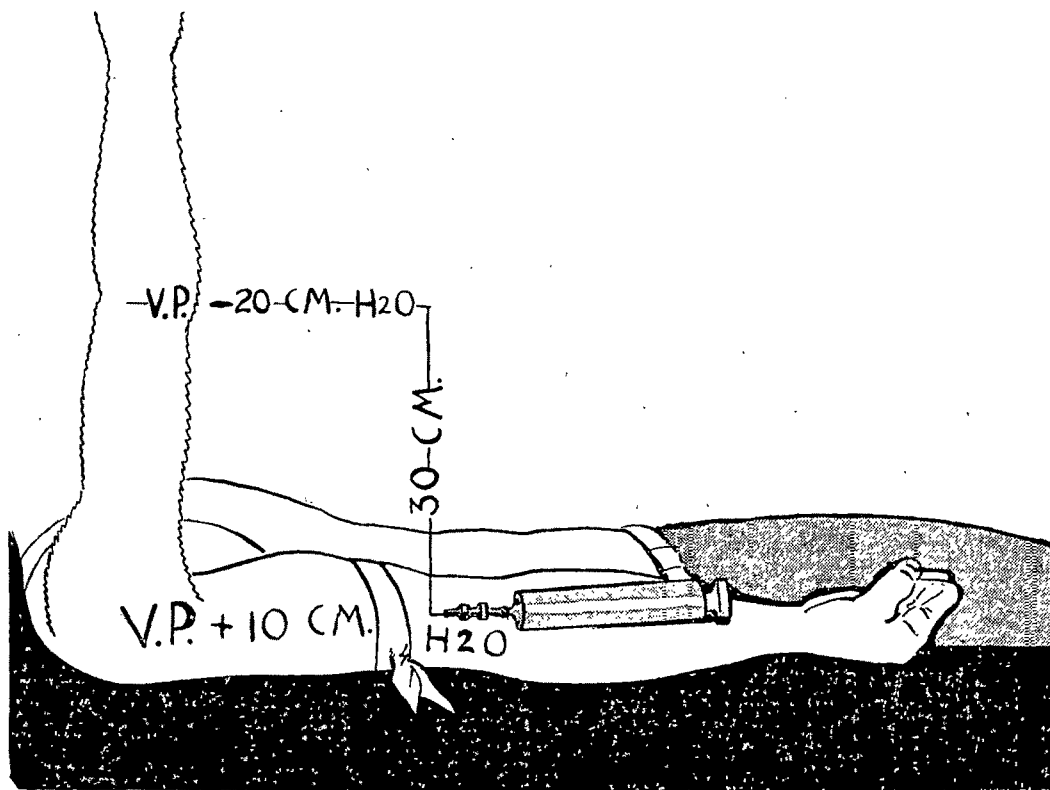


FIG. 2.—Venous pressure changes in the antecubital vein with a change of position.

was not completely well, he was classified as improved; (3) the remainder of the patients were classed as no remission.

The results of therapy with insulin shock and ECT are presented in Table 1. It may be seen that the remission rate with either ECT or insulin was approximately the same, 79 and 77%. However, the percentage of complete remissions with insulin was slightly in excess of that with ECT. A small group of patients who showed no remission with either treatment, did achieve improvement when the other type of therapy was tried. The largest percentage of patients were classified either as catatonic or paranoid dementia præcox, and there seemed to be no significant difference in the remission rate of the various types.

TABLE 1
RESULTS OF SHOCK THERAPIES
(In percentage)

Therapy	Complete remission	Improved	No remission
Insulin	33	44	23
ECT	25	54	21
Insulin and ECT.....	12	60	28

There were no fatalities in the present group. We have encountered 3 complications. One patient sustained a comminuted fracture of the right humerus during electroshock. The surgical care was entirely uneventful and the patient had a complete remission from his mental symptoms. A second patient had a recurrence of a previously dislocated jaw during the first electroshock. Treatment was successfully completed with the use of curare. One patient went into prolonged shock for 96 hours. The complete report on this case has been published separately (Goldfarb, Laughlin, Kiene, 1944). He made an uneventful recovery after the acute episode.

DISCUSSION

The neuropsychiatric casualties of World War I have been magnificently summarized in Volume X of "The Medical Department of the United States Army in the World War." The reports from the various hospitals described neurotic and psychotic syndromes associated with ordinary military

life and combat which are identical with the material seen in this war. The conception of the war neurosis as a defensive mechanism was discussed on pages 370 to 378. However, despite the fact that considerable spontaneous remission occurred among the "psychotics," the cases were still considered to be similar to the civilian type of psychosis. The following summary is quoted from the report of one of the installations:

In the manic-depressive psychoses group, insofar as it was possible to obtain reliable information, 35 had had a previous attack. It must be remembered, however, that the number of patients who had had previous attacks was undoubtedly greater, but as many of the patients were entirely inaccessible, information in regard to this could not be obtained. The depressions predominated. . . . Many of the patients presented a typical schizophrenic history, but were in an apparently normal condition and well adjusted. Some of them gave quite adequate explanations for their upset, such as nostalgia and worry over misfortune at home. Others stated that they had been unfairly treated in the Army. The eventual outcome appeared to be problematical. It was felt that the original diagnosis should be left unchanged. (Page 109.)

The military life, both non-combat and combat, is a psychological traumatic experience for many individuals. We have had the opportunity of observing the various mechanisms of defense against traumatic experiences encountered in the Army, and since this installation received patients after they were screened in other hospitals, the psychological reactions were necessarily the extremely incapacitating ones. Because of the close association of the psychological response with the particular situational trauma of army life, it was not surprising that the course and prognosis of the psychotic-like reactions often differed markedly from those seen in civil practice. Duval and Hoffmann (1941) described the acute explosive course of dementia præcox in military personnel, and we have noted the following additional differences in their response to shock treatment: (1) the psychotic in military life usually developed the illness as he left the area of his home, and the disease tended to remit as he returned to his home environment; (2) the simple and hebephrenic types showed the same rate of remission with shock therapy as did the paranoid and catatonic types. The latter in civilian practice usually had the best prognosis. It was interesting

in this respect that we included a group of 4 cases in this report who were first hospitalized in an army hospital in Egypt over a year before they received insulin shock treatment. Of these 4 cases, only 1 improved with treatment. Although these numbers are not sufficient for any mathematical evaluation, a remission rate of 25% for cases of over a year duration is comparable with the reports of treatment in civilian cases; (3) the remission rate of 79% in the group treated with electroshock was far in excess of any remission rate reported for cases seen in civil population (Smith *et al*, 1943); (4) many of these cases diagnosed as dementia praecox showed a predominance of the schizoid reaction with a mixture of a large affective component which was not characteristic of the average schizophrenic seen in civil life (Bleuler, 1923).

The question of a situational precipitant was considered in these cases. In the bulk of the non-combat cases, the patients were in service for over a year. We therefore eliminated the factors of adjustment that they had to face when they entered the Army (Maskin and Altman, 1943). The soldier had already made his adjustment to the confining situation of the Army with its various social, economic and sexual limitations. However, numerous patients in our group showed the initial symptoms at the port of embarkation in the States, on the boat, or soon after they arrived in the European theater of operations. A history of many of these cases revealed, however, that their service in the States had been at a post near their home, or that they had taken their families with them to the vicinity of the post. In these cases, transfer to the combat zone produced the same psychic trauma of being alone that most soldiers first experienced when they were inducted in the Army. There was a considerable group of patients who developed the psychotic reaction after some time in the European theater, but in whom there was a definite history of poor adjustment throughout their stay in the theater. Two types of history were most frequently elicited. The first was that of the soldier who could not adjust to the social and sexual activity commonly enjoyed by his fellow soldiers, and who was thrown back upon himself and became more and more seclusive.

This patient was usually conscientious, religious and over-scrupulous. The second was that of the soldier who either created difficulties, usually sexual, with the civil population in England, or had domestic difficulties with his family in the States since his departure. The improvement of these cases with therapy was almost uniformly good. The efficacy of the shock treatment compared with the fact that the patients were going to be evacuated to the States was always a question. However, many of the patients were not informed of their disposition until treatment was terminated. The immediate improvement which followed shock treatment usually influenced the examiners toward giving these patients the benefits of therapy.

SUMMARY

1. The case histories of psychotics in the military personnel, and the effect of the shock therapies was reviewed and analyzed. The response to treatment was found to differ markedly from the response observed in civil practice.

2. Various modifications of technique were described and illustrated.

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THE PHYSICIAN AND THE FEDERAL NARCOTIC LAW *

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I. TYPES OF NARCOTIC DRUGS COVERED

Narcotic drugs covered by the law are those included within the classification opium, coca leaves, and any compound, salt, derivative or preparation thereof.¹ They include, for instance, all of the alkaloids and salts of opium, whether of the phenanthrene or isoquinoline groups. By an amendment approved July 1, 1944, to the Federal law isonipecaine, a synthetic substitute for morphine, was added to this classification and is therefore subject to the operation of the Federal narcotic law in the same manner as is morphine. Isonipecaine is defined as 1-methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester, or any salt thereof, by whatever trade name designated.²

2. INTERNATIONAL ACTION

Modern narcotic drug legislation is the result of the efforts of our government to give full effect to its obligations under the international conventions to which it is a party.³ The first of these important international agreements is known as the International Opium Convention of 1912.⁴ Under this convention the contracting powers assumed the obligation, among others, to enact pharmacy laws or regulations to limit exclusively to medical and legitimate purposes the manufacture, sale and use of morphine, cocaine, and their respective salts unless laws or regulations on the subject were already in existence. The contracting powers were obligated to cooperate with one another to prevent the use of these drugs for any other purpose.

* This paper is one of a series dealing with "scientific proof and relations of law and medicine" (second series). The first series was published in 1943. The symposium consists of studies by legal and medical authorities, each paper appearing approximately simultaneously in a prominent medical and a prominent legal journal.

The paper here presented is published also in the *Tulane Law Review*.

¹ 26 U. S. C. 2550.

² 26 U. S. C., Supp. IV, 2550, 3228.

³ Foreign Relations of the United States, 1914, p. 931.

⁴ Treaty Series No. 612; 38 Stat. 1912, 1930.

In 1925 the second international convention on the subject of narcotic drugs was signed at Geneva on behalf of a number of World Powers, not including the United States, this agreement being described as the International Opium Convention adopted by the Second Opium Conference (League of Nations), signed at Geneva February 19, 1925.⁵ This Convention sought to make more specific the obligations of the 1912 Convention, notably in the control of international trade in narcotics, and established a Permanent Central Board with certain functions in connection with the supply, and international movement of narcotic drugs. Our government did not sign or ratify this convention at the time, because it did not give effect to the principle, advanced by the United States, of direct control of production of the source raw material (the opium poppy and the coca leaf). However, in Article 31 it was provided that the present (1925) convention replaces, as between the contracting parties, the provisions of Chapters I, III and V of the Convention signed at The Hague on January 23, 1912, which provisions remain in force as between the contracting parties and any States parties to the said Convention which are not parties to the present Convention. The United States fully cooperated with the contracting powers which had ratified the 1925, as well as with those which had merely ratified the 1912, Convention, in international action looking toward control of the narcotic drug traffic. Our government, as a matter of fact, had already adopted legislative measures which gave effect to the provisions of the 1925 Convention, pursuant to the obligations assumed under the 1912 Convention.

A third international agreement, concluded at Geneva July 13, 1931, was the Convention for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs.⁶ The ratification by the United States of this Convention was deposited at Geneva

⁵ League of Nations Treaty Series No. 1845, Vol. 81, p. 319.

⁶ Treaty Series No. 863; 48 Stat. 1543.

on April 28, 1932, and was proclaimed by the President July 10, 1933. The outstanding feature of this Convention is that it obligates each High Contracting Party to furnish annual estimates to a Supervisory Body of its requirements for narcotic drugs, based solely on the medical and scientific requirements of the country, and limits manufacture of the drugs to the total requirements thus estimated. The Convention incorporates and therefore in effect adopts certain provisions of the preceding 1925 Convention. It further obligates the High Contracting Parties to take all necessary legislative or other measures in order to give effect within their countries to the provisions of the Convention. Another important and interesting feature of the Convention is the imposition of a special obligation upon each of the High Contracting Parties to create a special administration for the purpose of (a) applying the provisions of the Convention; (b) regulating, supervising and controlling the trade in the drugs; and (c) organizing the campaign against drug addiction, by taking all useful steps to prevent its development and to suppress the illicit traffic.

3. FEDERAL NARCOTIC STATUTES

The two principal Federal narcotic statutes are the Act of May 26, 1922, known as the Narcotic Drugs Import and Export Act, as amended,⁷ and the so-called Harrison Narcotic Law, now incorporated in the Internal Revenue Code.⁸ The Narcotic Drugs Import and Export Act authorizes the importation of such quantities only of opium and coca leaves as the Commissioner of Narcotics shall find to be necessary to provide for medical and scientific needs. Importation of any form of narcotic drug, except such limited quantities of crude opium and coca leaves, is prohibited. Exportation of manufactured drugs and preparations is permitted under a rigid system of control designed to assure their use for medical needs only in the country of destination.

The Harrison Narcotic Law as reenacted in the Internal Revenue Code is designed to direct the manufacture and distribution of narcotic drugs through medical channels to consumption use for medical pur-

poses only. This statute and the regulations promulgated thereunder⁹ more directly affect the practicing physician and will be the basis of the following discussion:

4. REGISTRATION

(a) *Qualification Prerequisite*

A physician who intends to practice medicine and to administer or dispense narcotic drugs in the course of such practice must apply for registration under the Harrison Law with the Collector of Internal Revenue of the district in which he proposes to practice, and must pay the appropriate occupational tax for the fiscal year applicable. Before being entitled to such registration, however, he must be lawfully entitled under the laws of the State or Territory or district wherein he intends to practice, to distribute, dispense, give away or administer narcotic drugs to patients upon whom he, in the course of his professional practice is in attendance.¹⁰ In the case of a medical practitioner, this requirement usually means that the applicant is a physician who holds an unrevoked and unrestricted license to practice medicine in the particular State, Territory or district. To be entitled to registration, however, in the case of any type of practitioner of the healing art, it must appear that he is entitled under the State laws to distribute, administer or dispense narcotic drugs to patients whom he is professionally attending. "The right to register and pay tax under the Federal statute depends on the right to dispense under the State laws."¹¹

(b) *Inventory Required*

Every person making application for registry or re-registry as a physician shall, as of December 31 preceding the date of his application, or any date between December 31 and the date of applying for such registry or re-registry, prepare under oath or affirmation, in duplicate, an inventory of all narcotic

⁹ 26 C. F. R. 151.1-151.205; 26 C. F. R., Cum. Supp., 151.54-151.185.

¹⁰ 26 U. S. C. 3220.

¹¹ *Perry v. Larson*, 104 F. (2d) 728; *Waldo v. Poe*, 14 F. (2d) 749; *Bruer v. Woodworth*, 22 F. (2d) 577; *Eurke v. Kansas State Osteopathic Assn.*, 111 F. (2d) 250; *Georgia Assn. of Osteopathic Physicians and Surgeons v. Allen*, 112 F. (2d) 52; *Cavanagh v. Fowler*, 146 F. (2d) 961.

⁷ 21 U. S. C. 171-185.

⁸ 26 U. S. C. 2550-2565, 3220-3228.

drugs and preparations on hand at the time of making such inventory. The inventory shall be prepared on Form 713, copies of which may be obtained from Collectors of Internal Revenue upon request. The original inventory shall be forwarded to the Collector with the application for registration, and the duplicate shall be kept on file by the maker for a period of two years.

(c) *Special Tax Stamp*

Upon approval of the application for registration the Collector of Internal Revenue will assign a registry number to the applicant and will issue him a special tax stamp in Class IV as a practitioner. This special tax stamp must be kept posted conspicuously on the premises covered by the registration, *i. e.*, the physician's office.

(d) *Change of Location of Office*

A physician registrant who changes the location of his office shall, within 30 days, execute a new return on Form 678-A, marking it "Revised Registry." The return shall set forth the date of change and the new name or address. The return shall be forwarded with the special tax stamp to the Collector who issued the stamp for recording the change. If the removal is to another State, Territory or district, the physician must, of course, be qualified in the new location to administer, dispense or distribute narcotic drugs to patients, which usually means that he must also be licensed to practice medicine in the new location.

5. DISPENSING AND PRESCRIBING— IN GENERAL

(a) *Direct Dispensing or Administration*

A physician may obtain narcotic drugs for direct dispensing or administration to patients only on official order forms. He may not obtain narcotic drugs on a so-called prescription for general office use. Official order forms are obtainable from the Collector of Internal Revenue in a book of ten originals and duplicates, for ten cents. The form is to be prepared in duplicate and signed by the physician, the original copy being forwarded to a qualified manufacturer

or wholesaler, and the duplicate retained by the physician for a period of two years subject to inspection by a duly authorized Federal or State narcotic officer. The order form may be prepared in typewriting, ink or indelible pencil, but not by the use of an ordinary lead pencil.

(b) *Prescribing*

A physician may issue for a bona fide patient, for medical purposes only, a prescription for narcotic drugs which may be filled by a qualified retail dealer (druggist).

6. PRESCRIPTIONS

(a) *Formal Requirements*

A prescription for narcotic drugs shall be dated as of and signed on the date when issued and shall bear the full name and address of the patient and the name, address and registry number of the practitioner. A physician may sign a prescription in the same manner as he would sign a check or legal document, as, for instance, J. H. Smith, John H. Smith, or John Henry Smith. Prescriptions should be written with ink or indelible pencil or typewriter; if typewritten, they shall be signed by the practitioner. The refilling of a prescription for taxable narcotic drugs is prohibited.

(b) *Misuse of Prescription Form as an Order Form*

A physician must not use his prescription form to obtain narcotic drugs for general office practice. Narcotic drugs desired for general office practice are obtainable on official order form, as above described, from a qualified manufacturer or wholesale dealer. An order for narcotic drugs for general office practice, written on a prescription blank, is not a lawful prescription within the meaning of the law and can have no effect to validate the sale which is illegal.

(c) *Fictitious Names*

When the names of fictitious patients are discovered on narcotic drug prescriptions filed with a druggist it is usually a clear indication of wilful catering to drug addiction,

whether or not the so-called prescriptions are also discovered to be forged. Sometimes the physician will insert a fictitious patient's name, however, because he wishes to conceal from the druggist the fact that the real patient is consuming drugs, notwithstanding that the real patient is claimed to have a bona fide medical need therefor. The law does not permit the use of a fictitious patient's name upon a prescription.

(d) *Telephone Orders*

The furnishing of narcotic drugs pursuant to telephone advice of practitioners is prohibited, whether prescriptions covering such orders are subsequently received or not, except that in an emergency a druggist may deliver narcotic drugs through his employee or responsible agent pursuant to a telephone order; provided the employee or agent is supplied with a properly prepared prescription before delivery is made, which prescription shall be turned over to the druggist and filed by him as required by law.

(e) *Safeguarding Blanks for Narcotic Drugs*

A physician's prescription blanks should be most carefully safeguarded and never left where persons who may be drug addicts will have opportunity to take them, and to prepare and have filled forged narcotic prescriptions. A physician's official order forms should be likewise safeguarded, and great care should be exercised by the physician in keeping his stock of narcotic drugs secure from robbery or pilfering. The medicine case of morphine tablets should never be left in an unattended automobile.

7. PROFESSIONAL PRACTICE IN PRESCRIBING OR DISPENSING NARCOTIC DRUGS

(a) *Constitutionality of the Harrison Narcotic Law*

The constitutionality of the Harrison Narcotic Law was first challenged before the United States Supreme Court in 1919 by Dr. C. T. Doremus of Texas. Dr. Doremus had been indicted under section 2 of the Act (now section 2554, of Title 26 of the United States Code). The Supreme Court sustained

the constitutionality of section 2 as having reasonable relation to the raising of revenue, and stated that the Act "may not be declared unconstitutional because its effect may be to accomplish another purpose as well as the raising of revenue."¹²

In 1927, the constitutional validity of section 1 of the Act (now section 2553, of Title 26 of the United States Code) was questioned by a defendant, not a physician, who had been convicted of purchasing narcotic drugs not in or from the original tax stamped packages. The Supreme Court affirmed the constitutionality of the challenged section.¹³

In 1928, a defendant who was not a physician again challenged the constitutional validity of section 2 of the Act, notwithstanding the previous Doremus decision, and the Supreme Court reaffirmed the constitutionality of this section.¹⁴

(b) *Professional Practice as Applied to Drug Addiction*

In a leading case decided March 3, 1919, the Supreme Court enunciated an important principle in connection with the meaning of the words "professional practice" as used in section 2 of the Harrison Act.¹⁵ In this case Webb was a practicing physician and Goldbaum a retail druggist in Memphis. It was Webb's regular custom and practice to prescribe morphine for habitual users upon their application to him therefor. He furnished these prescriptions not after consideration of the applicant's individual case and in such quantities and with such direction as, in his judgment, would tend to cure the habit, or as might be necessary or helpful in an attempt to break the habit, but with such consideration and in such quantities as the applicant desired for the sake of continuing his accustomed use. Goldbaum was familiar with such practice and habitually filled such prescriptions. Within a period of eleven months Goldbaum purchased from wholesalers in Memphis thirty times as much mor-

¹² United States v. Doremus, 249 U. S. 86.

¹³ Harry R. Alston v. United States, 274 U. S. 289.

¹⁴ Frank Nigro v. United States, 276 U. S. 332.

¹⁵ Webb and Goldbaum v. United States, 249 U. S. 96.

phine as was bought by the average retail druggist doing a larger general business, and he sold narcotic drugs in 6,500 instances. It was also shown that during the same period Webb had issued and Goldbaum had filled over 4,000 such narcotic prescriptions, and that a certain user of the drugs had applied to Webb for morphine and was given at one time ten so-called prescriptions for one gram each, which prescriptions were filled at one time by Goldbaum although each was made out in a separate fictitious name. The United States Circuit Court of Appeals, upon this statement of fact, propounded the following question to the United States Supreme Court:

If a practicing and registered physician issues an order for morphine to an habitual user thereof, the order not being issued by him in the course of professional treatment in the attempted cure of the habit, but being issued for the purpose of providing the user with morphine sufficient to keep him comfortable by maintaining his customary use, is such order a physician's prescription under exception (b) of section 2 (of the Harrison Act)?

To this question the Supreme Court answered, "To call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required. That question should be answered in the negative."

The Supreme Court emphasized this rule in a later case involving the prescribing of narcotics by a practitioner for an addict, by holding in part as follows:

Manifestly the phrases "to a patient" and "in the course of his professional practice only" are intended to confine the immunity of a registered physician, in dispensing the narcotic drugs mentioned in the Act, strictly within the appropriate bounds of a physician's professional practice, and not to extend it to include a sale to a dealer or a distribution intended to cater to the appetite or satisfy the craving of one addicted to the use of the drug. A "prescription" issued for either of the latter purposes protects neither the physician who issues it nor the dealer who knowingly accepts and fills it.¹⁶

In the *Dr. Morris Behrman* case¹⁷ decided by the Supreme Court in 1922, the defendant was charged with unlawfully selling to an

addict by means of three so-called prescriptions, 150 grains of heroin, 360 grains of morphine, and 210 grains of cocaine, with the intent that the addict would use the same by self-administration in divided doses over a period of several days. The indictment did not in terms challenge the good faith of the physician and did not contain the allegation that the prescriptions were not issued in the course of professional practice only. A demurrer to the indictment was sustained in the District Court and the case was appealed to the United States Supreme Court. The Supreme Court pointed out that the quantities of narcotics named in the indictment were charged to have been entrusted to a person known by the physician to be an addict, without restraint upon him in its administration or disposition by anything more than his own weakened and perverted will. Such so-called prescriptions, said the court, could only result in the gratification of a diseased appetite for these pernicious drugs, or result in an unlawful parting with them to others, in violation of the Act as heretofore interpreted in this court, within the principles laid down in the *Webb* and *Jim Fuey Moy* cases. Notwithstanding the omissions in the indictment, therefore, the court held that the acts charged constituted offenses within the terms and meaning of the Act, and the judgment of the District Court to the contrary was reversed.

(c) *The Linder Case*

The effect of the decision of the Supreme Court in the *Dr. C. O. Linder* case¹⁸ has been misunderstood by some physicians, who evidently regarded the decision as authority to cater to drug addiction as such notwithstanding previous decisions of the court which declared this activity not within the course of professional practice of a physician. *Dr. C. O. Linder* was charged with the unlawful sale to an addict of one tablet of morphine and three tablets of cocaine for self-administration in divided doses over a period of time. Here, as in the *Behrman* case, the indictment did not specifically challenge the good faith of the physician, or negative that

¹⁶ *Jin Fuey Moy v. United States* (1920), 254 U. S. 189.

¹⁷ *United States v. Morris Behrman* (1922), 258 U. S. 280.

¹⁸ *C. O. Linder v. United States* (1925), 263 U. S. 5.

the sale was in the course of professional practice only. The quantity of drugs sold was, of course, far less than the quantity prescribed by Dr. Behrman. Dr. Linder was convicted but when his case reached the Supreme Court the judgment of conviction was reversed.

In the course of the opinion there was discussion that direct control of medical practice in the States is beyond the power of the Federal Government, and that incidental regulation of such practice by Congress through a taxing act cannot extend to matters plainly inappropriate and unnecessary to reasonable enforcement of a revenue measure. But the court had first significantly noted that the indictment "does not question the doctor's good faith nor the wisdom or propriety of his action according to medical standards," and that "it does not allege that he dispensed the drugs otherwise than to a patient in the course of his professional practice or for other than medical purposes." In concluding the opinion, therefore, the court stated

We find no facts alleged in the indictment sufficient to show that petitioner had done anything falling within definite inhibitions or sufficient materially to imperil orderly collection of revenue from sale. . . . The unfortunate condition of the recipient certainly created no reasonable probability that she would sell or otherwise dispose of the few tablets entrusted to her; and we cannot say that by so dispensing them the doctor necessarily transcended the limits of that professional conduct with which Congress never intended to interfere.

All that the Linder case holds, therefore, is that in the absence of an allegation in the indictment negating good faith and professional practice, the court cannot supply the omission by holding as a matter of law that the sale of four tablets of narcotics necessarily transcends the limits of professional practice. The court could so hold, in the Behrman case, because the quantities were so large as to preclude any possibility that they were prescribed professionally.

It follows, therefore, that where the indictment challenges the good faith and professional practice of a physician who prescribes or directly sells narcotic drugs for the purpose of merely gratifying and perpetuating narcotic drug addiction as such and if convicted of such an offense, the judgment of

conviction will stand and a number of United States Circuit Courts of Appeal¹⁹ have so held in cases involving convictions of physicians which reached these intermediate appellate courts after the Linder case was decided, and in which the Linder decision was urged as exculpating the convicted physician.

(d) *The A. W. Boyd Case*

One year after its decision in the Linder case, the Supreme Court rendered its decision in the case of Dr. A. W. Boyd,²⁰ in which the physician had been convicted on six counts of an indictment charging unlawful sales by means of prescriptions issued not in good faith and not in the course of his professional practice. These prescriptions were issued for 30 to 48 grains each to two named drug addicts. It was established that the physician purchased and distributed over 15,000 grains of morphine between May 1 and September 30, and that he issued prescriptions on much the same scale during that period. The court pointed out that the disputed question was whether the defendant issued the prescriptions in good faith in the course of his professional practice. The Government's evidence tended strongly to show that the prescriptions were for quantities many times in excess of what, according to any fair medical standards, reasonably could be put into the possession of confirmed addicts, even when treating them for the addiction or endeavoring to relieve them from suffering incident to it. Much of the defendant's evidence tended to show that he issued the prescriptions in good faith in the course of professionally treating the recipients for their addiction and endeavoring to relieve them from its incidents, but the court noted that some of the evidence submitted in behalf of the defendant was pronouncedly corroborative of that for the Government. The court, in sustaining the judgment of conviction, quoted with implied approval the charge to the jury which had been made at

¹⁹ *Boehm v. United States* (1927), 21 F. (2d) 283; *Nelms v. United States* (1927), 22 F. (2d) 79; *DuVall v. United States* (1936), 82 F. (2d) 382; *Freeman v. United States* (1936), 86 F. (2d) 243; *Hawkins v. United States* (1937), 90 F. (2d) 551.

²⁰ *A. W. Boyd v. United States*, 271 U. S. 104

the request of the defendant's counsel, as follows:

I am requested to say to you, gentlemen, that in determining whether or not the defendant in prescribing morphine to his patients was honestly seeking to cure them of the morphine habit while applying his curative remedies, it is not necessary for the jury to believe that the defendant's treatment would cure the morphine habit, but it is sufficient if defendant honestly believed his remedy was a cure for this disease.

I instruct you that if this is true, regardless of whether the course of treatment given by this defendant is a cure, the question is, was he honestly and in good faith in the course of his professional practice and in an effort to cure disease issuing these prescriptions.

This charge certainly was as fair as the defendant could have wished, but the jury, under all the evidence submitted, could hardly have done otherwise than convict.

(e) *The Peter Young Case*

Dr. Peter Young had been convicted on eight counts of an indictment charging sales of quantities of certain conditionally exempt narcotic preparations²¹ without having kept a record of the sales. Actually the total quantities of these narcotic preparations sold by the physician were large but unfortunately, from the standpoint of a proper presentation of the merits of the case, the indictment did not question the good faith or professional propriety of the unlawful sales charged. When this case reached the Supreme Court, it was necessarily considered on the theory that the physician dispensed or administered preparations to patients whom he personally attended, and the question of whether the dispensing or administration was in the course of professional practice was not before the court. Thus considered, the court reversed the judgment of conviction holding that physicians administering the preparations to patients whom they personally attended were not required to keep records of the preparations so administered.

(f) *The Professional Practice Rule In Intermediate Appellate Courts*

Subsequent to the decision of the Supreme Court in the A. W. Boyd case, the several

Circuit Courts of Appeals have applied the principle enunciated in that case in rendering decisions appealed to them by physicians who have been convicted under the Harrison Narcotic Law.²² In the DuVall case the Circuit Court of Appeals for the Ninth Circuit quoted with approval the following instruction to the jury which applies and interprets the principle:

If the prescriptions were issued in good faith and according to fair medical standards, in the curing of disease, and not merely to satisfy the cravings of the said persons for such drugs, then they may be said to have been issued in the course of the defendant's professional practice only; but if the prescriptions were not issued in good faith, but were issued to enable such person to obtain morphine sulphate to satisfy his appetite and cravings for such drugs only, and not in the treatment of his patient, then the issuance of such prescriptions would not be in good faith nor in the course of the defendant's professional practice as a physician, and the sale and dispensing upon such prescriptions would not be lawful.

8. AMBULATORY TREATMENT FOR DRUG ADDICTION

(a) *Legal and Medical Views*

The ambulatory treatment for the cure of drug addiction has always been disapproved by the United States Bureau of Narcotics because its observation and experience have shown that the object of the treatment is practically never achieved. The average drug addict who purports to undergo this treatment will invariably seek other sources of supply as his dosage is reduced. It will be recalled that the Supreme Court in the Behrman case²³ called attention to the danger of entrusting quantities of narcotic drugs to a known addict "without restraint upon him in its administration or disposition by anything more than his own weakened and perverted will." The Supreme Court in the Behrman case at least impliedly disapproved the procedure which is applied in pursuing the so-called ambulatory treatment for the cure of drug addiction, and in 1924 in a case involving the conviction of Dr. Addison

²¹ 26 U. S. C. 2551.

²² DuVall v. United States (1936), 82 F. (2d) 382; Ratigan v. United States (1937), 88 F. (2d) 919; United States v. Lindenfelt (1944), 142 F. (2d) 829; United States v. Abdallah (1945) 149 F. (2d) 219.

D. Hobart²³ the Circuit Court of Appeals for the Sixth Circuit construed the Behrman decision as condemning the ambulatory treatment as unlawful, as follows:

The case of *United States v. Behrman*, 258 U. S. 280, destroys the theory of the defense upon the present trial. Since that decision, there is no possibility that conduct such as Hobart admitted, could be lawful. The patient was not under restraint. Hobart furnished to him at frequent intervals and for self-administration, large quantities of morphine, though in quantities diminishing from one time to another; but the patient was at liberty to apply to other doctors and get as many other similar prescriptions as he could. In the case cited, the Supreme Court declared that this conduct by a physician was ipso facto violation of the law. . . .

Scientific medical opinion appears to be in harmony with the opinion of the court that disapproved the ambulatory treatment for cure of drug addiction. In 1924, the Reference Committee on Legislation and Public Relations recommended that the House of Delegates of the American Medical Association approve Recommendation No. 8 of the Committee on Narcotic Drugs of the Council on Health and Public Instruction.²⁴ The report of the Reference Committee was adopted as presented. Recommendation No. 8 of the Report of the Committee on Narcotic Drugs of the Council on Health and Public Instruction submitted by the Council to the House of Delegates at the Boston session, 1921, is as follows:

8. Your committee desires to place on record its firm conviction that any method of treatment for narcotic drug addiction, whether private, institutional, official or governmental, which permits the addicted person to dose himself with the habit-forming narcotic drugs placed in his hands for self-administration, is an unsatisfactory treatment of addiction, begets deception, extends the abuse of habit-forming narcotic drugs, and causes an increase in crime. Therefore, your committee recommends that the American Medical Association urge both federal and state governments to exert their full powers and authority to put an end to all manner of such so-called ambulatory methods of treatment of narcotic drug addiction, whether practiced by the private physician or by the so-called "narcotic clinic" dispensary.

In the opinion of your committee, the only proper and scientific method of treating narcotic drug addiction is under such conditions of control of

both the addict and the drug, that any administration of a habit-forming narcotic drug must be by, or under the direct personal authority of the physician, with no chance of any distribution of the drug of addiction to others, or opportunity for the same person to procure any of the drug from any source other than from the physician directly responsible for the addict's treatment.

(b) *Recognized (Institutional) Treatment*

The most practicable plan of applying the only proper and scientific method of treating narcotic drug addiction under the conditions laid down by the Committee on Narcotic Drugs of the Council on Health and Public Instruction, is to establish an institution properly staffed and equipped for the purpose. By the Act of Congress approved January 19, 1929,²⁵ provision was made for, and there were later constructed and put into operation, two institutions located at Lexington, Kentucky, and Fort Worth, Texas, respectively, for the treatment and rehabilitation of narcotic drug addicts, under the supervision of the United States Public Health Service. The facilities of these two institutions, available primarily for prisoner-addicts are also made available for voluntary applicants, even if they are unable to pay a nominal sum representing part of the cost of the treatment. A large number of drug addicts, including some physicians, have received treatment and rehabilitation in these institutions.

9. FEDERAL INVESTIGATIVE PROCEDURE

(a) *Primary Purpose*

The primary purpose of Federal investigative procedure, as far as the physician is concerned, is to prevent diversion of narcotic drugs from medical channels to abusive use. Thus it becomes necessary to investigate, and to report to legal procedure to penalize that physician who wilfully prescribes or directly sells narcotic drugs merely for the gratification and perpetuation of narcotic drug addiction.

(b) *Prerequisite to Investigation of a Physician*

No investigation of a criminal violation on the part of a physician is permitted to be

²³ *Hobart v. United States*, 299 Fed. 784.

²⁴ Journal, American Medical Association, 82: 1967, 1924.

²⁵ 21 U. S. C. 221-237.

made by an officer of the Bureau of Narcotics unless such investigation is based on well-founded suspicion, strong circumstances, or trust-worthy and reliable information that such violation is being committed. Furthermore, no field officer of the Bureau of Narcotics is permitted to initiate any such investigation as above described except upon written instructions from his superior officer, the District Supervisor of the District.

(c) *Rule Established by Federal Courts*

A defense quite frequently sought to be interposed by a physician indicted for unlawful sales of narcotic drugs is that he was illegally entrapped by the officers into committing the offenses charged against him. The United States Circuit Courts of Appeals have consistently rejected such claims on the part of defendant physicians, holding in effect that it does not constitute illegal entrapment for the officer to afford an opportunity for the physician to sell narcotic drugs if the sale was the defendant's free voluntary act.²⁶ The rule which was applied by the United States Circuit Court of Appeals for the Eighth Circuit in the case of *W. V. Smith, et al. v. United States* is even more liberal than the procedure outlined by the Bureau limiting its field officers in making investigations of violations on the part of physicians. The Circuit Court of Appeals in the *W. V. Smith* case quoted with approval the following charge to the jury in that case:

It is no enticement to ask a physician to write an illegal prescription, if you suspect that he might do it, and you want to find out if he does it, nor to ask a druggist to sell narcotics illicitly, because both of them know better, and if they are going to obey the law, why they won't do that in response to any form of petition or inducement, and it is perfectly within the rights of investigating officers to determine, by means that have been here disclosed, whether a party, or parties, are engaged in violation of the law, and if they are, to take steps accordingly, so that I wish to disabuse your minds of all this confusion that this, in itself, was such an unwarrantable offense on the part of Federal officers that it relieves this offense charged, if you find any offense was committed, of its character as such offense.

²⁶ *Ratigan v. United States* (1937), 88 F. (2d) 919; *W. V. Smith, et al. v. United States* (1922), 284 Fed. 673; *Newman v. United States* (1924), 299 Fed. 128; *Hodge v. United States* (1926), 13 F. (2d) 596; *Mitchell v. United States* (1944), 143 F. (2d) 953; *United States v. Abdallah* (1945), 149 F. (2d) 219.

10. UNIFORM STATE NARCOTIC LAW

The National Conference of Commissioners on Uniform State Laws after several years' study completed in 1932 the final draft of a Uniform Drug Act which it thereupon recommended for enactment in all the States. This act has been adopted, in some cases with a few changes, by 42 States, by Congress for the District of Columbia, and by the Territories of Alaska, Hawaii, and Puerto Rico. The States of California and Pennsylvania which have not adopted the Uniform State Narcotic Law, nevertheless have in effect other State narcotic legislation which the Bureau of Narcotics considers of comparable effectiveness. The States of Massachusetts, New Hampshire, Kansas, and Washington have not adopted the Uniform State Narcotic Law but have in effect State narcotic legislation which the Bureau of Narcotics does not consider comparable in effectiveness to the Uniform Law.

The Uniform State Narcotic Law provides a comprehensive plan for intrastate control of the narcotic drug traffic, and is designed generally to restrict narcotic drugs to medical channels from the manufacturer or distributor within the State to the consumer for bona fide medical purposes. The act differs from the Federal law in some respects. For instance, it requires manufacturers of and wholesale dealers in narcotic drugs to obtain a license from the appropriate State agency and prescribes certain qualifications for these licensees, and it directly and specifically penalizes the forgery or alteration of a narcotic prescription. In so far as the professional use of narcotic drugs is concerned, however, the statutory standard is practically the same as that provided by the Federal narcotic law. Thus, under the Uniform Act, a physician in good faith and in the course of his professional practice only is permitted to prescribe, administer and dispense narcotic drugs, or may cause the same to be administered by a nurse or intern under his direction and supervision.

11. COOPERATION WITH THE STATES

Under Section 8 of the Act of June 14, 1930²⁷ the Secretary of the Treasury is directed to cooperate with the several States

²⁷ 21 U. S. C. 198.

in the suppression of the abuse of narcotic drugs in their respective jurisdictions and to this end he is authorized (1) to cooperate in the drafting of such legislation as may be needed and (2) to arrange for the exchange of information concerning the use and abuse of narcotic drugs in said States and for cooperation in the institution and prosecution of cases in the courts of the United States and before licensing boards and courts of the several States. The Secretary of the Treasury has authorized the Commissioner of Narcotics to furnish to State Licensing Boards such information in the possession of the Bureau of Narcotics as the Commissioner may deem appropriate to the enforcement of any State law or regulation or municipal ordinance relating to the granting, withholding, suspension, or revocation of State licenses or permits.²⁸ The Commissioner is also authorized to direct the attendance, as a witness, in hearings held by such boards or agencies, of any officer, agent or employee of the Bureau of Narcotics, and the production of pertinent records or copies thereof. Pursuant to this authority, the Commissioner reports to the several State Medical Licensing Boards a statement of the facts in the cases of practitioners convicted of offenses against the narcotic laws or who are shown to be narcotic drug addicts. If the State Licensing Board decides to institute action under its Medical Practice Act looking toward suspension or revocation of the practitioner's license and desires the attendance of the Federal investigating officer as a witness at the hearing, the Commissioner arranges the attendance of such officer at the hearing

and the production of such pertinent records as may be necessary.

12. CONCLUSION

Dr. Morris Fishbein in his introduction²⁹ to a series of articles printed in the Journal of the American Medical Association in 1931 on the Indispensable Use of Narcotic Drugs, has presented to the medical profession some excellent suggestions dealing with the general professional use of narcotic drugs. If all physicians would accept and conscientiously follow these suggestions, which are quoted below, irregularities in prescribing and dispensing narcotic drugs by physicians would be reduced to a minimum.

The problem of narcotic addiction merits the attention of physicians for many reasons. The control by statute of the prescribing of alcohol, and the definite limitations of the amount prescribed, indicates that the medical profession must do everything possible to minimize the prescribing of narcotics in order to make unnecessary further restrictive measures. Physicians should give more serious consideration to the materia medica, pharmacology and therapeutics of narcotics.

Physicians may, by the exercise of more thought in practicing, do much to avoid censure in relation to narcotic addiction. They may substitute, whenever possible, non-habit-forming drugs in the place of morphine or other opium alkaloids. When narcotics are indispensable, however, as shown in this series of articles, no more should be administered than is necessary to achieve the desired end. Patients requiring daily administration should be seen often by the doctor and the amount of drugs ordered or supplied should not exceed that required by the patient until seen again. Independence of administration on the part of nurses should be strictly limited to prescription and any change in treatment should be in writing.

²⁸ 21 C. F. R. 201.8-201.12.

²⁹ Various authors; The Indispensable Use of Narcotic Drugs, 96:856, 1931.

MENTAL ACCOUNTABILITY UNDER MILITARY LAW *

COLONEL ABNER E. LIPSCOMB, J. A. G. D.¹

In a recent court-martial case a psychiatrist testified that an accused, who had served successfully as an officer and who appeared to be altogether rational, was,

No more able to adhere to the right as we defined it here and avoid expressing his symptoms than a man with acute appendicitis is able to alter the course of his acute appendicitis by an act of will.

He was then permitted to testify that the accused was legally sane but medically insane and to explain his apparent contradiction by stating that ". . . our concepts of sanity are derived from English law of one hundred years ago. . . ." Attached to the record was a plea for clemency in which the trial judge advocate and his assistant stated that they were of the opinion that if this case were tried three to five years in the future the accused would be ". . . acquitted by reason of the changing concept of sanity."

At about the same time the United States Court of Appeals for the District of Columbia rendered an opinion involving the law of insanity in the case of *Holloway v. United States*. (Decided Feb. 26, 1945.) This opinion is interesting, not because of its disposition of the case, but because of its analysis of psychiatry and because of certain of its statements concerning mental accountability, among which were the following:

Legal tests of criminal insanity are not and cannot be the result of scientific analysis or objective judgment. There is no objective standard by which such a judgment of an admittedly abnormal offender can be measured. They must be based on the instinctive sense of justice of ordinary men.

The tendency of psychiatry is to regard what ordinary men call reasoning as a rationalization of behavior rather than the real cause of behavior. From this point of view psychiatrists probe behind what ordinary men call the "reasoning" of an abnormal personality. This tends to restrict the area of moral judgment to an extent that offends our

traditional idea that an offender who can talk and think in rational terms is morally responsible for what he does.

. . . . to the psychiatrist mental cases are a series of imperceptible gradations from the mild psychopath to the extreme psychotic, whereas criminal law allows for no gradations. It requires a final decisive moral judgment of the culpability of the accused. For the purposes of conviction there is no twilight zone between abnormality and insanity. An offender is wholly sane or wholly insane.

A complete reconciliation between the medical tests of insanity and the moral tests of criminal responsibility is impossible. . . . To command respect criminal law must not offend against the common belief that men who talk rationally are in most cases morally responsible for what they do.

The above opinions raise questions which, for the purpose of the present discussion, may be summarized as follows:

1. What is the military justice concept of mental accountability? Does it hold the so-called "medically insane" to criminal responsibility?
2. Is mental accountability to be determined on the basis of a scientific analysis or "on the instinctive sense of justice of ordinary men"?
3. What is the proper function of the psychiatrist in an insanity case?
4. Upon whom does the burden of proof lie, and in the final analysis how and by whom must the issue of mental accountability be determined?

These and other questions which have frequently arisen in courts-martial cases have suggested the following brief review of the history of the law of insanity and an appraisal of the standard of mental accountability evolved by military justice.

LEGAL TESTS FOR INSANITY PRIOR TO 1843

During the early history of the common law the madman charged with murder was not acquitted by reason of insanity but a special verdict might be rendered reciting that the accused was insane and thereafter he might be pardoned by the king. There was the same need of a royal pardon for homicide by misadventure or in self defense.² During this early period only a few of the psychoses were known and recognized; con-

* This article, in somewhat altered form, was published in *The Judge Advocate Journal*, Vol. II, No. 2.

¹ A. B., LL. B., Baylor University 1925; LL. B., University of Texas, 1934; S. J. D., Harvard, 1938. Professor of Law, School of Law, Western Reserve University. Former Chairman, Board of Review Number 3, Office of The Judge Advocate General.

² Pollock & Maitland's *History of English Law*, Vol. 2, p. 478.

sequently we find that insanity was generally regarded as a visitation from the Almighty, and many thought that the insane were under demoniacal influence. In fact, it was not until the late 18th and early 19th centuries that the medical profession began to study insanity with any degree of thoroughness.³ During this early period various legal tests were promulgated as legal guides in determining criminal accountability. Among these tests were "the wild beast" test which relieved the criminally insane from accountability only if he were "totally deprived of his understanding and memory, and [did] not know what he [was] doing no more than an infant, than a brute, or a wild beast";⁴ the "count twenty pence" test;⁵ and the test of "disability of distinguishing between good and evil."⁶ Clearly these harsh tests exempted only the most obvious lunatics and imbeciles. The gradual amelioration, however, of criminal law and the development of the science of medicine led to a more humane approach to the problems of criminal justice and resulted in 1843 in the famous opinion in the *McNaghten* case.

THE MCNAGHTEN CASE—THE RIGHT AND WRONG TEST

This landmark in the history of the law of insanity arose as the result of the general dissatisfaction over the acquittal of Daniel McNaghten upon the ground of insanity. McNaghten was tried for the murder of Edward Drummond, Secretary to Sir Robert Peel. The evidence in the case showed that McNaghten had mistaken Drummond for Peel. It further showed that McNaghten had been laboring under the insane delusion that Sir Robert Peel had injured him. After McNaghten had been acquitted, the House of Lords, under its power to require opinions of its judges on abstract questions of law, propounded five questions to the Court of the House of Lords. To the five questions the court answered, as follows:

1. INSANE DELUSION

As to "those persons who labor under such partial delusions only, and are not in other respects

insane, we are of opinion that, notwithstanding the party accused did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable according to the nature of the crime committed, if he knew at the time of committing such crime that he was acting contrary to law; by which expression we understand your Lordships to mean the law of the land."

2. PRESUMPTION OF SANITY

... the jurors ought to be told in all cases that every man is to be presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction. . . .

3. RIGHT AND WRONG TEST

... to establish a defence on the ground of insanity, it must be clearly proved that, at the time of the committing of the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong.

4. INSANE DELUSION (CONTINUED)

As to a person laboring "... under such partial delusion only, and is not in other respects insane, we think he must be considered in the same situation as to responsibility as if the facts with respect to which the delusion exists were real. For example, if, under the influence of his delusion, he supposes another man to be in the act of attempting to take away his life, and he kills that man, as he supposes, in self-defence, he would be exempt from punishment. If his delusion was that the deceased had inflicted a serious injury to his character and fortune, and he killed him in revenge for such supposed injury, he would be liable to punishment."

5. MEDICAL TESTIMONY—THE HYPOTHETICAL QUESTION

In reply to the question "Can a medical man conversant with the disease of insanity, who never saw the prisoner previously to the trial, but who was present during the whole trial and the examination of all the witnesses, be asked his opinion as to the state of the prisoner's mind at the time of the commission of the alleged crime? or his opinion whether the prisoner was conscious at the time of doing the act that he was acting contrary to law, or whether he was laboring under any and what delusion at the time?" the judges answered that "... we think the medical man, under the circumstances supposed, cannot in strictness be asked his opinion in the terms above stated, because each of those questions involves the determination of the truth of the facts deposed to, which it is for the jury to decide, and the questions are not mere questions upon a

³ The History of Insanity as a Defense to Crime in English Criminal Law, 12 Cal. L. Rev. 105.

⁴ *Reg. v. Arnold*, 16 How St. Tr. 695, 765.

⁵ 1 Hale, P. C. 29.

⁶ Hawkins' Plea to the Crown, Vol. 1, p. 1.

matter of science, in which case such evidence is admissible. But where the facts are admitted or not disputed, and the question becomes substantially one of science only, it may be convenient to allow the questions to be put in that general form, though the same cannot be insisted on as a matter of right."

Within the same year "the right and wrong test," as set forth in answer number 3, was judicially employed.⁷ In that case the court held that a feeble-minded defendant whom the jury had found to know the difference between right and wrong was legally accountable for murder. Similarly, the various jurisdictions within the United States followed the lead of the McNaghten opinion by adopting some form of the "right and wrong test." In fact, since 1843 no English or American court has demanded a more exacting standard of proof of insanity than is required by the McNaghten opinion.

IRRESISTIBLE IMPULSE TEST

The McNaghten opinion was, however, soon subject to much criticism. Learned men of the sciences contended that the right and wrong test as the sole determining test of mental accountability was inadequate and untrustworthy; that it failed to take into account the obvious facts of nature; and that it failed to comprehend the complex pathology of insanity. It was also asserted that experience had shown that "... in all lunatics, and in most degraded idiots, whenever manifestations of any mental action can be adduced, a feeling of right and wrong may be proved to exist."⁸ To meet such criticisms and to supplement the inadequacy of the right and wrong test, the theory of "irresistible impulse" was advanced. Under this theory a person may, because of disease, defect or derangement of the mind, be incapable of restraining himself from some particular act although knowing it to be wrong. As early as 1878 Sir James Stevens, in drafting a criminal code for England, sought, but without success, to supplement the right and wrong test by introducing the irresistible impulse test into the statutory law of that jurisdiction.⁹ The reluctance of

the courts and of the legislative bodies both in England and in this country to accept the more difficult concept involved in the irresistible impulse test has at times been marked by reactionary intolerance. One state went so far as to abolish insanity completely as a defense but its legislative enactment was declared unconstitutional.¹⁰ One court, dogmatically refusing to recognize the existence of an irresistible impulse, charged the jury as follows:

The law says to men who say they are afflicted with irresistible impulse, "if you cannot resist an impulse in any other way, we will hang a rope in front of your eyes and perhaps that will help."¹¹

Other judges have rendered decisions based upon their personal lack of scientific knowledge. Thus one justice states,

For myself I cannot see how a person who rationally comprehends the nature and quality of an act, knows that it is wrong and criminal, can act through irresistible innocent impulse.¹²

On the other hand, other jurists have revealed praiseworthy humility before the problems of a complicated science. Such humility is splendidly exemplified in the case of *Parsons v. State*¹³ in which Mr. Justice Somerville stated:

It will not do for the courts to dogmatically deny the possible existence of such a disease, or its pathological and psychical effects, because this is a matter of evidence, not of law, or judicial cognizance. Its existence, and effect on the mind and conduct of the patient, is a question of fact to be proved, just as much as the possible existence of cholera or yellow fever formerly was before these diseases became the subjects of common knowledge, or the effects of delirium from fever, or intoxication from opium and alcoholic stimulants would be. The courts could, with just as much propriety, years ago, have denied the existence of the Copernican system of the universe, . . .

The controversy in this field of the law has been extensive. In 1910 Colonel John H. Wigmore, then president of the American Institute of Criminal Law and Criminology, appointed a committee composed of four physicians and five lawyers to resolve the difficult problem of determining the relation

¹⁰ *State v. Strasburg*, 60 Wash. 106, 110 Pac. 1020.

¹¹ Riddell, J., in charging the jury in *Rex v. Cheighton*, 1908, 14 Can. Crim. Cas. 349.

¹² *State v. Harrison*, 1892, 36 W. Va. 729, 15 S. E. 982, 18 L. R. A. 224.

¹³ 1886, 81 Ala. 577, 60 A. Rep. 193.

⁷ *Rex v. Higginson*, 1 Car. & K. 129.

⁸ Bucknell on Criminal Lunacy, p. 59.

⁹ History of Insanity in Criminal Law, 12 Cal. L. Rev. 104, 119.

of insanity to criminal responsibility. In 1916 this committee, which had been in continuous existence since its appointment, brought in a unanimous resolution recommending a bill on criminal responsibility, as follows:

When Mental Disease a Defense. No person shall hereafter be convicted of any criminal charge when at the time of the act or omission alleged against him he was suffering from mental disease and by reason of such mental disease he did not have the particular state of mind that must accompany such act or omission in order to constitute the crime charged.¹⁴

The code of France provides that "There can be no crime, or offense if the accused was in a state of madness at the time of the act." Justice Somerville in *Parsons v. State* states,

For some time the French tribunals were inclined to interpret this law in such a manner as to follow in substance the law of England. But that construction has been abandoned, and the modern view of the medical profession is now adopted in that country.

Similarly the criminal code of Germany reputedly contains a provision, which is said to have been the formulated result of a very able discussion both by the physicians and lawyers of that country. The German code provides

There is no criminal act when the actor at the time of the offense is in a state of unconsciousness or morbid disturbance of the mind, through which the free determination of his will is excluded.¹⁵

Although the English courts have persistently adhered to the right and wrong test of the McNaghten opinion to the exclusion of the so-called irresistible impulse test, the various jurisdictions within the United States have been divided.¹⁶ Miller on Criminal Law states,

Some judges have used the term (insanity) in contradistinction to the "right and wrong" test; others use it as illustrative of that test; others insist that the "right and wrong" test properly interpreted includes the element of irresistible impulse; and still others deny that such a form of insanity exists.

A majority of American jurisdictions, however, seem to reject the irresistible impulse

tests.¹⁷ Indeed, the New York Penal Code recognizes the defense of insanity only when the defendant "was laboring under such a defect of reason as either (1) not to know the nature and quality of the act he was doing, or (2) not to know whether the act was wrong."¹⁸

MEANING OF RIGHT AND WRONG IN TESTING SANITY

Mr. Justice Cardozo, in discussing the meaning of right and wrong as those words are employed in testing sanity, has stated:

As propounded in these cases, it meant a capacity to distinguish right from wrong, not with reference to the particular act, but generally or in the abstract. Sometimes it was spoken of as a capacity to distinguish between "good and evil." . . . Wrong was conceived of as synonymous not with legal but rather with moral wrong. Lord Mansfield told the jury in *Bellingham's Case*: "It must be proved beyond all doubt that at the time he committed the atrocious act, he did not consider that murder was a crime against the laws of God and nature." That became for many years the classic definition. It was followed by Lord Lyndhurst in *Reg. v. Oxford* (9 C. and P. 533). Its phraseology, as we shall see, has survived with little variation in charges and opinions of our own day.¹⁹

As has been pointed out, however, by Justice Bartlett in *People v. Carlin*,²⁰ "it is not enough that the accused has views of right and wrong that are at variance with those that find expression in the law. The variance must have its origin in some disease of the mind."²¹

If we accept moral responsibility as the basic test of legal accountability ". . . both the right and wrong test and the irresistible impulse test ought to be recognized. If free will and self-restraint be destroyed by mental disease, knowledge of right and wrong is entirely useless. Will is as necessary an element of criminal intent as are reason and judgment."²² As Steven said, "Legal

¹⁷ See Wharton's Criminal Law, 12th Ed., sec. 408, and cases therein cited.

¹⁸ Penal Code, N. Y., 21, see *People v. Taylor*, 138 N. Y. 398, 34 N. E. 275.

¹⁹ *People v. Schmidt* 1915, 216 N. Y. 324.

²⁰ 194 N. Y., 448, 87 N. E. 805.

²¹ See *Hotema v. United States*, 186 U. S. 413, 22 S. Ct. 895, 46 L. Ed. 1225.

²² Criminal Responsibility of the Insane and Feeble-Minded, 9 Journal of Criminal Law and Criminology, p. 497.

¹⁴ Insanity and Criminal Responsibility, 30 Harvard L. Rev., 535, 536.

¹⁵ 14 Encyc. Brit., 9th Ed., p. 112.

¹⁶ Wharton's Criminal Law, 12th Ed., Sec. 408.

Punishment connotes as far as possible moral infamy."

THE IRRESISTIBLE IMPULSE TEST DISTINGUISHED FROM MORAL AND EMOTIONAL INSANITY

The theory of the irresistible impulse test must be carefully distinguished from the so-called moral or emotional insanity which some courts have described as a perverted condition of a person's moral nature. It is recognized that a person may become so morally degenerate either from bad associations and surroundings or from continued unrestrained indulgence in vice that his conscience will no longer restrain him. Such moral degeneration does not excuse a person from criminal responsibility. Neither does so-called emotional insanity or temporary frenzy or passion arising from excitement or anger which is not the product of a mental disease. There is danger of being misled by the decisions dealing with these subjects as the terms have sometimes been carelessly used. Each case must be examined to see whether the irresistible impulse under consideration arose from a mental disease or merely from a moral depravity or callous nature.²³

MENTAL ACCOUNTABILITY IN THE FEDERAL COURTS

The early United States District Court decisions seem to follow the McNaghten opinion and to restrict mental accountability to the so-called right and wrong test.²⁴ As far back, however, as 1873 the Supreme Court of the United States in *Mutual Life Insurance Company v. Terry*,²⁵ gave its blessing to a modification of the old rule. Mr. Justice Hunt stated:

We hold the rule on the question before us to be this. . . . If the death is caused by the voluntary act of the assured, he knowing and intending that his death shall be the result of his act, but when his reasoning faculties are so far impaired that he

is not able to understand the moral character, the general nature, consequences and effect of the act he is about to commit, or when he is compelled thereto by an insane impulse, which he has not the power to resist, such death is not within the contemplation of the parties to the contract, and the insurer is liable. (Italics supplied.)

This attitude toward the "irresistible impulse" theory has been reaffirmed and clarified in various decisions,²⁶ all of which are cited and discussed in *Smith v. United States*,²⁷ which is probably the leading Federal opinion on the subject. The opinion states in part, as follows:

Laying aside the objectionable negative style of the charge, we think it erroneous in point of law, in that it ignores the modern well-established doctrine of "irresistible impulse." The English rule, followed by the American courts in their early history, and still adhered to in some of the states, was that the degree of insanity which one must possess at the time of the commission of the crime in order to exempt him from punishment must be such as to totally deprive him of understanding and memory. This harsh rule is no longer followed by the federal courts or by most of the state courts. The modern doctrine is that the degree of insanity which will relieve the accused of the consequences of a criminal act must be such as to create in his mind an uncontrollable impulse to commit the offense charged. This impulse must be such as to override the reason and judgment and obliterate the sense of right and wrong to the extent that the accused is deprived of the power to choose between right and wrong. The mere ability to distinguish right from wrong is no longer the correct test either in civil or criminal cases, where the defense of insanity is interposed. The accepted rule in this day and age, with the great advancement in medical science as an enlightening influence on this subject is that the accused must be capable, not only of distinguishing between right and wrong, but that he was not impelled to do the act by an irresistible impulse, which means it will justify a verdict of acquittal that his reasoning powers were so far dethroned by his diseased mental condition as to deprive him of the will power to resist the insane impulse to perpetrate the deed, though knowing it be wrong.

Subsequent to the above opinion the entire personnel of the Court of Appeals for the District of Columbia was changed. In its recent opinion in *Holloway v. United States*, cited at the beginning of this article, the pres-

²³ Clark & Marshall Crimes, 4th Ed., Sec. 87; Miller on Criminal Law, p. 130; 22 BR 1, 52.

²⁴ See *United States v. Holmes*, 1858, Federal Case No. 15382; Cinteau's case, 1882, 10 Fed. 161; *United States v. Faulkner*, 1888, 35 Fed. 730; and *United States v. Young*, 1885, 25 Fed. 710.

²⁵ 15 Wallace 580.

²⁶ *Insurance Company v. Rodel*, 95 U. S. 232, 24 L. Ed. 433; *Manhattan Life Insurance Company v. Broughton*, 109 United States 121, 27 L. Ed. 878; *Davis v. United States*, 165 U. S. 375; 41 L. Ed. 750; see also *United States v. Chisholm*, 153 Fed. 808, C. C. S. D. Ala. 1907.

²⁷ 36 F. (2) 548, App. D. C. 1929.

ent members, in considering a case involving the issue of insanity and without referring to the Smith decision, stated, "The ordinary test of criminal responsibility is whether the defendant could tell right from wrong." They then added, "A slightly broader test is where his reason has ceased to have dominion over his mind to such an extent that his will was controlled, not by rational thought, but by mental disease." In discussing the application of the tests of mental accountability they stated:

For the purposes of conviction there is no twilight zone between abnormality and insanity. An offender is wholly sane or wholly insane. A complete reconciliation between the medical test of insanity and the moral test of criminal responsibility is impossible. . . . To command respect criminal law must not offend against the common belief that men who talk rationally are in most cases morally responsible for what they do.

The reference to the irresistible impulse test as a slightly broader test than that involved in the right and wrong test is a distinct understatement. Only one who suffers from an extreme form of psychosis is unable to distinguish right from wrong. Such a person is clearly insane and incompetent for all purposes. On the other hand, the irresistible impulse theory recognizes the scientific truth that the capacity to feel remorse and to distinguish right from wrong does not necessarily imply the mental ability to control conduct. The introduction of this theory was a distinct compromise with the law's traditional concept as expressed in the Holloway opinion that "An offender is wholly sane or wholly insane." Contrary also to one of the statements quoted, the irresistible impulse standard of accountability acknowledges that there are twilight zones between abnormality and insanity as it is usually understood in which a man may walk and talk rationally and yet, because of a diseased mind, be so incapable of controlling his conduct as not to possess freedom of action and not to be, therefore, legally responsible for his acts. Since medical science recognizes that an insane impulse may be truly irresistible, and since criminal justice punishes only for acts voluntarily and freely committed, the mandates of simple justice require that full effect be given to this basic principle.

STANDARDS OF MENTAL ACCOUNTABILITY UNDER MILITARY LAW

The present Manual for Courts-Martial (1928) has provided military justice with a standard of mental accountability which is free from dogma, which is independent of any conventional legal or medical definition of insanity, and which is designed to establish mental accountability upon the basis of moral justice. The Manual states,

. . . . A person is not mentally responsible for an offense unless he was at the time so far free from mental defect, disease, or derangement as to be able concerning the particular acts charged both to distinguish right from wrong and to adhere to the right.²⁸

The Manual for Courts-Martial, 1921, on this point provides that in determining the issue of mental responsibility for a crime, the courts-martial having such responsibility should ballot upon the following question:

(2) Was the accused at the time of the commission of the alleged offense so far free from mental defects, mental disease, or mental derangement as to be able, concerning the particular acts charged, both (1) to distinguish right from wrong and (2) to adhere to the right?

This question will be balloted upon as to each specification, and if answered negatively or a tie vote the court will acquit the accused as to such specification.²⁹

Similarly, Winthrop states:

To constitute a defense on the ground of insanity, it may be made to appear, . . . on the other hand, that, though aware of the nature and consequence of his act, as well as of its wrongfulness or its illegality, he was prompted by such an uncontrollable impulse as not to be a free agent.³⁰

A rule which was apparently even broader and more liberal than that contained in the foregoing quotations was set forth in paragraph 219 of the Manual for Courts-Martial, 1917, which asserted that the question to be determined in any case involving mental accountability was "whether the accused at the time of the wrongful act had the necessary criminal mind to commit the wrongful act charged."

It seems clear that the standard for mental accountability as set forth in the Manual

²⁸ M. C. M., 1928, par. 78.

²⁹ M. C. M., 1921, par. 219g.

³⁰ Winthrop's Military Law and Precedents, Reprint 1920, p. 234.

combines both the concept of the right and wrong test and the concept of the irresistible impulse test and is sufficiently inclusive to encompass the problems involving insane delusion as presented in the McNaghten opinion. Upon the military justice test the ultimate triers of the facts are not concerned with complicated definitions or with conventional forms of so-called insanity but rather with the following all-important questions:

(a) Was the accused at the time of the alleged offenses "so far free from mental defect, disease or derangement as to be able concerning the particular acts charged" to distinguish right from wrong?³¹

(b) Was the accused at the time of the alleged offenses "so far free from mental defect, disease and derangement as to be able concerning the particular acts charged . . . to adhere to the right?"³²

(c) Was the accused at the time of his trial sufficiently sane "intelligently to conduct or cooperate in his defense?"³³

If either of the first two questions is answered in the negative the accused should be found not guilty by reason of mental disease, defect or derangement. If the third question is answered in the negative he should not be tried. The above principle has been consistently recognized in military law.³⁴ For example, in 13 BR 389, *Riesenman*, the accused was shown to be an intelligent individual, able to conduct his own defense and to recognize right from wrong as to the particular acts charged. Since, however, the evidence showed that he was suffering from mental disease, defect or derangement which rendered him unable, concerning the particular acts charged, to adhere to the right, the findings of guilty were disapproved. In a much older decision, The Judge Advocate General summarized this controlling principle, as follows:

Men, under the influence of disease, may know the right, and yet be powerless to resist wrong. The well-known exhibition of cunning by persons admitted to be insane, in the perpetration of an illegal act, would seem to indicate comprehension of its evil nature and legal consequence, and yet the

power of self-control being lost from disease, there can be no legal responsibility.³⁵

THE BURDEN OF PROOF

Although there are differences of opinion in the state courts concerning the party who bears the burden of proof on the issue of mental accountability, the practice in military law is well settled. The Manual for Courts-Martial directs:

Where a reasonable doubt exists as to the mental responsibility of an accused for an offense charged, the accused cannot legally be convicted of that offense. . . .³⁶

This provision, which is similar to the provision of the 1921 Manual, places the burden of ultimate persuasion on the issue of mental responsibility upon the prosecution and recognizes the fundamental principle that all men are deemed innocent until proved guilty beyond a reasonable doubt.³⁷ On this point the United States Supreme Court has made the following authoritative pronouncement:

. . . . Strictly speaking, the burden of proof, as those words are understood in criminal law, is never upon the accused to establish his innocence or to disprove the facts necessary to establish the crime for which he is indicted. It is on the prosecution from the beginning to the end of the trial and applies to every element necessary to constitute the crime. . . .

* * * *

If insanity is relied on and evidence given tending to establish that unfortunate condition of mind, and a reasonable well-founded doubt is thereby raised of the sanity of the accused, every principle of justice and humanity demands that the accused shall have the benefit of the doubt.³⁸

It is clear, therefore, that evidence which raises a reasonable doubt as to an accused's mental responsibility overcomes the presumption of his sanity and injects the issue of his mental accountability into the court-martial trial. The burden then rests with the prosecution to prove, as an instance to the ultimate issue of guilt, that the accused was "so far free from mental defect, disease, or derangement as to be able concerning the particular acts charged both to distinguish right from wrong and to adhere to the

³¹ Fifth sub-paragraph, paragraph 78a, p. 63, M. C. M., 1928.

³² Fifth sub-paragraph of paragraph 78a, p. 63, M. C. M., 1928.

³³ First sub-paragraph of paragraph 63, M. C. M., 1928.

³⁴ See 1 BR 39, 46; 8 BR 57; 11 BR 281, 297; 13 BR 389; 14 BR 339; 15 BR 281; 18 BR 301, 312; 23 BR 115.

³⁵ CM 116694, *James*.

³⁶ M. C. M., 1928, par. 78.

³⁷ See M. C. M., 1921, par. 219.

³⁸ *Davis v. United States*, 160 U. S. 469.

right." If the prosecution fail to establish such proof beyond a reasonable doubt, the court should acquit the accused.

PROBATIVE FORCE OF A REPORT BY A BOARD OF MEDICAL OFFICERS—THE EXPERT'S TESTIMONY

The primary function of a board of medical officers appointed pursuant to Army Regulation 600-500 is to examine into the mental condition of a designated person for the purpose of rendering an opinion concerning his sanity or mental accountability to the authority directing the examination. Since the personnel of the board act out of court, and since they have not been subjected to cross-examination, they should be called as witnesses and given an opportunity to explain their conclusions. The necessity of this procedure was recognized in the Manual for Courts-Martial, 1917, wherein it was stated:

The medical report as a whole will be admissible in evidence, and when admitted the court will have called as a witness for the court at least one of the members of the board to be thoroughly examined, as if on cross-examination, by counsel for the accused, the judge advocate or the court, as to any feature of the report, *and on request of the accused the remaining members of the board shall be called for cross-examination.* (Italics supplied.)

The testimony of an alienist may be based upon the following:

- (a) Personal acquaintance with the accused.
- (b) Personal examination and observation of the accused.
- (c) Hypothetical questions which permit medical officers to express opinions upon facts assumed to be true which in reality may be in dispute. By use of the hypothetical question the court is given the benefit of the expert's opinion for use by the court if the court resolves the factual issue consistent with the assumed facts in the hypothetical question.

RESULT OF A FINDING OF NOT GUILTY BY REASON OF MENTAL DEFECT, DISEASE OR DERANGEMENT

An acquittal by reason of mental defect, disease or derangement does not adjudge the accused to be insane but only indicates that

a reasonable doubt exists as to his mental accountability for the particular offense charged. Accordingly, before the accused may legally be incarcerated in an institution for the insane, he must be examined by a special board of medical officers in accord with Army Regulations in order to determine whether or not his mental disorder is of a type requiring such incarceration. If the court erroneously applies the test of the Manual for determining mental accountability and wrongfully finds the accused guilty and if the Board of Review and The Judge Advocate General hold the record of trial legally insufficient to sustain such findings of guilty, the reviewing or confirming authority may order a rehearing or such other action as may be appropriate.³⁹

PROVING MENTAL ACCOUNTABILITY—THE FUNCTION OF THE PSYCHIATRIST

The ultimate problem of determining the mental accountability of an accused is a factual one to be determined by the court in the light of the legal standard fixed by military law. This standard states the law's concept of moral justice by directing that an accused shall not be convicted unless he is "so far free from mental defect, disease, or derangement as to be able concerning the particular acts charged both to distinguish right from wrong and to adhere to the right." Since the standard measures out the law's concept of moral justice, the court's function in applying it does not involve primarily moral judgment but the fact finding problem of determining from the evidence before it the existence or nonexistence of a disabling mental disease, defect or derangement.

Mental capacity like other human qualities or conditions may and, in most cases must, be discovered by circumstantial evidence. Because of this recognized truth, great latitude is allowed by the courts in the reception of evidence.⁴⁰ In this connection Wigmore states:

The first and fundamental rule, then, will be that any and all conduct of the person is admissible in evidence. There is no restriction as to the kind of conduct. There can be none; for if a specific act

³⁹ A. W. 50½, par. 4.

⁴⁰ Wharton's Criminal Evidence, 11th Ed., Sec. 318.

does not indicate insanity it may indicate sanity. It will certainly throw light one way or the other upon the issue.⁴¹

It is also relevant and proper to show pre-existing external circumstances which may have tended to produce a specific mental condition or the prior or subsequent existence of a condition from which a particular mental condition may be inferred.⁴² For the same reason Wigmore stated:

It is almost universally agreed that a lay-witness is qualified to testify to insanity; and it seems to be universally accepted that, in whatever form the issue of insanity may be presented, the jury may take into consideration the behavior of the person as observed by them. (Sec. 1160.)

Although it appears that insanity is not necessarily inherited, psychiatrists state that there is a definite tendency for this malady to be transmitted to descendants. It has also been shown that insanity may appear in one generation and not in the following but may re-appear in the third generation. It follows, therefore, that the insanity both of an ancestor, as well as that of a collateral relative, may indicate an anterior ancestral tendency to the disease which may appear in other collateral branches of the family. Although some courts have imposed limitations on evidence showing this inherited tendency, courts-martial have been liberal in the admission of such evidence.

The proper function of the psychiatrist as an expert witness on mental conditions should be well understood. Although his testimony is of vital importance to a proper understanding of certain forms of mental conditions, there is no rule of evidence which requires his testimony in a court-martial case and no rule of preference which accords to it greater weight than that accorded to other relevant testimony.⁴³ In the Army, however, as in other jurisdictions where modern procedure is followed, an accused who has raised the issue of his mental accountability is placed under observation by physicians with the result that their expert testimony becomes a practical requirement in his trial.⁴⁴ The probative force of the testimony of the

psychiatrists is dependent, as is the probative force of the testimony of all witnesses, first, upon the witnesses' individual credibility as evaluated by the court; and secondly, upon the logic and clarity of his scientific analysis of the problem before the court. His primary function is to enlighten the court on the pathology and symptoms of the particular mental disorder with which the accused may be afflicted and to explain the probable effect of such a mental condition upon the accused's ability to distinguish between right and wrong and his ability to control his conduct. The psychiatrist just as the court which he serves should endeavor not to inject his individual concept of morality and justice into the case. He should acquaint himself with the military standard of mental accountability and remember that when he is testifying before a court-martial, or advising a reviewing authority, he is not functioning under the law of his particular state or applying a test of sanity as it existed under English law one hundred years ago, but that he is seeking to help the court or the reviewing authority to make a scientific and truthful answer to the questions involved in the military justice standard of mental accountability.

CONCLUSIONS

In conclusion and to answer more particularly the questions listed at the beginning of this article, it should be observed that military justice in determining the issue of mental accountability is not controlled by any conventional, legal or medical definition of sanity and that certainly it is not restricted to the concepts of the English law of one hundred years ago. On the contrary, military justice has evolved a unique standard of mental accountability which includes not only the concepts involved in the traditional so-called right and wrong test but also the more liberal and humane concept of moral justice involved in the so-called irresistible impulse test. In incorporating this latter concept into its standard of mental accountability, military justice has recognized the scientific truth that the capacity to feel remorse and to distinguish between right and wrong does not necessarily imply power to control conduct. It has thus compromised the law's

⁴¹ Wigmore on Evidence, 3rd Ed., Sec. 228.

⁴² Wigmore, *supra*, Sec. 227.

⁴³ Wigmore, *supra*, Sec. 2090.

⁴⁴ Wigmore, *supra*, 2090, c.

traditional arbitrary concept that all persons within certain categories possess absolute freedom of will and that all persons within other categories possess none. It has repudiated the conventional legal position as stated in *Holloway v. United States*, *supra*, that, "For the purposes of conviction there is no twilight zone between abnormality and insanity. An offender is wholly sane or wholly insane." In other words, the military justice standard of mental accountability represents a compromise between law and medical science, a compromise between the concept of sanity and justice of the ordinary man and the concept of justice and sanity of the modern psychiatrist. It admits that a man may walk and talk rationally and yet not be medically, morally or legally responsible for his conduct.

Although it has not been entirely satisfactory to the lawyer or to the psychiatrist, it possesses distinct merit. It is based upon the fundamental principle of criminal justice that a crime has not been committed unless

the accused, at the time of the particular offense complained of, possessed the necessary mental intent or attitude. Obviously, without a knowledge of the rightness or wrongness of an act, an accused could not have a criminal mind. Likewise, if the accused, because of mental illness, is deprived of the power of choice or of volition he does not possess the mental attitude essential to criminal responsibility. Moreover, the military justice standard is not a test of sanity or insanity as those words are generally understood. It employs neither word and it does not require a determination as to the existence of either condition. Since the standard is free from the restraints of dogma and from inflexible legal and medical definitions, it should remain useful despite changing views as to the nature and scope of mental diseases. Regardless, however, of its merits the problem of its just application is a difficult one and one which calls for intellectual humility and painstaking effort on the part of all concerned.

MENTAL ACCOUNTABILITY UNDER MILITARY LAW IN CANADA¹

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As regards military law in Canada, a primary fact must be kept in mind: a person subject to military law when in His Majesty's dominions may be tried by any competent civil court for any offence for which he would be triable if he were not subject to military law. While, for convenience, military courts are given power to deal with most civil offences, they cannot try an accused person for treason, murder, manslaughter, treason-felony or rape, unless such person at the time he committed the offence was on active service or unless the place where the offence was committed is more than one hundred miles in a straight line from any place in which the offender can be tried for such offence by a competent civil court. In practice, military courts are reluctant to try cases of the greater felonies (especially murder, manslaughter and rape) if the matter can be turned over to a civil court to deal with.

Now, it is precisely in respect of the greater felonies, involving penalties of death or life imprisonment, that the defence of insanity is raised. No counsel is likely to put in a plea of insanity to a lesser charge, involving at most imprisonment for a term of years—for acquittal on the ground of insanity normally involves incarceration in an institution for the care of the criminally insane, and that is virtually equivalent to a life sentence.

It follows that military courts have had comparatively little to do with the plea of out-and-out insanity, though it often happens that evidence of weak-mindedness is adduced before such courts in support of an argument for mitigation of the penalties for lesser offences.

Military courts recently, however, have exercised jurisdiction to try charges of treason, mutiny and desertion; and, in respect of such matters, considerations of mental accountability become of great interest and importance.

The principles by which a military court will be governed in deciding questions of liability where the defence of insanity has been raised are set forth in the Manual of Military Law issued by command of the Army Council in England, and made applicable to Canadian troops under the provisions of the Militia Act, R.S.C. 1927, C. 132. These principles differ in no way from those which are applied in the trial of offenders in civil courts in Canada.

The fundamental test is that which was established in *McNaghten's Case*. This test finds statutory formulation in S. 19 of the Canadian Criminal Code. "No person shall be convicted of an offence by reason of an act done or omitted by him when labouring under natural imbecility, or disease of the mind, to such an extent as to render him incapable of appreciating the nature and quality of the act or omission, and² of knowing that such an act or omission was wrong. A person labouring under specific delusions, but in other respects sane, shall not be acquitted on the ground of insanity . . . unless the delusions caused him to believe in the existence of some state of things which, if it existed, would justify or excuse his act or omission." It is not a good defence that the accused, though he can distinguish between right and wrong, is so affected by disease that he is incapable of controlling his actions; and the courts have been astute to point out the difficulties of distinguishing between the *irresistible impulse* and the *unresisted impulse*.

The burden of proof of insanity at the time of the commission of the offence lies with the accused. Every person, that is, is presumed to be sane and to be responsible for his acts until the contrary is proved; and it must, therefore, be clearly proved by the defence that the accused is brought within the terms of the exceptions above quoted.

Although irresistible impulse is not ac-

¹ This brief statement was written on request to permit comparison of usage in the United States and Canada.

² For "and" read "or," Vide *R. v. Cracknell*, [1931] 4 D.L.R. 657, O.R. 634, 56 Can. Cr. Cas. 190.

cepted by military tribunals as a defence, yet in fact it will be considered in determining the quantum of punishment. If, as happens in Canadian law, the sentence of death on conviction of murder is a mandatory one, yet there is much room for executive clemency; and the confirming authority will generally be ready to hear any argument that may be advanced for a review and commutation of sentence. At the trial itself, careful inquiry will be made into the prisoner's medical history, and evidence of mental strain and similar relevant psychological factors, will be received in support of an argument that the accused was subjected to provocation, or laboured under a mistaken impression as to his right, for example, to defend himself against aggression.

The position of the medical expert, in military trials where the sanity of the accused comes into question, is not apparently any different from that which is found in the

ordinary courts. A medical witness may be asked whether such and such appearances, proved by other witnesses, or from his own observation as a medical attendant prior to the trial, are in his judgment symptoms of insanity: but it appears that he may not be asked whether, from the other testimony given, the act with which the prisoner is charged is in his opinion an act of insanity. Medical men are confined to giving evidence of matters which come under their observation, and to saying what in their judgment would be the technical result of facts which are submitted to their consideration; they are not to reason upon hypothesis, or to give an opinion, and thus usurp the functions of the court. It may be suggested, however, that the average military tribunal is less disposed than an ordinary court to follow strictly the rules of evidence and that the opinion of a medical expert, if fairly and objectively offered, will usually not be taken amiss.

EMOTIONAL REACTIONS OF AMERICAN SOLDIERS TO AN UNFAMILIAR DISEASE¹

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I. INTRODUCTION

Since the beginning of the war American soldiers have been repeatedly exposed to unfamiliar diseases about which medical knowledge was incomplete at the time they were first contracted by our troops. In the Pacific theatre the first of these was malaria which was a major problem before atabrine therapy was standardized, to be followed by filariasis(2), scrub typhus, and schistosomiasis. Each of these diseases when first encountered by our troops was surrounded by an inevitable atmosphere of uncertainty. This tended to encourage emotional reactions in patients which themselves might produce symptoms or modify symptoms due to strictly organic causes. As a result, the duration and amount of invalidism caused by these illnesses was greater than might have been expected from their organic manifestations alone. As knowledge of each disease increased there was a decline in the amount of disability it produced, even without change in the methods of treatment. This improvement must be attributed to better attitudes on the part of both patients and physicians resulting from increased certainty as to the nature and treatment of the condition.

The problem of emotional reactions to an unfamiliar disease recently became acute at a general hospital in the Pacific area where a group of patients were being treated for schistosomiasis. Many patients showed a degree and persistence of invalidism so out of proportion to the objective findings that medical officers in charge of them requested a psychiatric evaluation of the situation. This study was an attempt to meet this request. It was undertaken at a time when uncertainties as to pathogenesis, organic manifestations, effectiveness of treatment, prognosis and disposition were at their height. Furthermore, the outbreak was of epidemic proportions,

taxing hospital facilities to the utmost. The necessity for treating large groups of patients made it impossible to give each patient the individualized attention he would have received in more favorable circumstances. These conditions heightened certain emotional reactions which are probably present to some degree in all illnesses in which the patient is uncertain about his condition. Similarly, they brought into focus certain problems of therapy and aspects of the physician-patient relationship which under normal circumstances might tend to pass unobserved. It is believed that the findings of this study apply in some degree to patients' attitudes in all illness. In particular, it is hoped that it will supply clues as to how to cut down emotionally aggravated invalidism, not only in patients with schistosomiasis, but in the unfamiliar diseases yet to be encountered as our troops occupy Japan.

Schistosomiasis is caused by a fluke which is transmitted by a water snail found in fresh water streams. The cercariae enter the unbroken skin and develop into adult worms which lodge chiefly in the mesenteric veins. These worms lay eggs, some of which ulcerate through the wall of the intestinal tract and appear in the stools. It is believed that most of the early symptoms of schistosomiasis are caused by allergic reactions to the ova. Common initial symptoms are malaise, fever, urticaria, angioneurotic edema, upper abdominal pain, constipation, stiffness of the neck and cough. Occasionally more or less severe neurological manifestations are seen. There is usually an accompanying leucocytosis with eosinophilia. A positive diagnosis is established by finding mature ova in the stools.

Little is known of the remote effects of the disease in white men who have had only a brief exposure. In native populations, liver cirrhosis with ascites may eventually occur. However, they differ from our troops both

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in having repeated re-infestations and in the presence of acquired immunity.

At the time of this study it was difficult to evaluate the course of schistosomiasis after the acute stage had passed. Most patients had no physical findings after the initial reaction was over. Enlarged lymph nodes and palpable liver and spleen were occasionally found, but they might be absent in the presence of definite persisting infestation, and of course might be present due to other causes in the absence of this disease. Laboratory findings might be equally inconclusive. Although mature ova in the stools indicated the continued presence of infection, their disappearance did not necessarily mean that a cure had been effected. The ova frequently disappeared following treatment, only to reappear at a later date. Total white count and eosinophil count were influenced by too many extraneous factors to be reliable guides of the course of the illness. Skin sensitivity tests and sigmoidoscopic examination gave promise of aiding in evaluating the progress of the infestation but were still in the investigative stage. Finally, patients' complaints, as will be seen, were useless as indicators because practically none were specific to the disease, and most were characteristic of emotional rather than organic disturbance.

The situation was further complicated by uncertainty as to the action of the trivalent antimony compounds used as therapeutic agents. It seemed that though they might cause the ova to disappear temporarily from the stool, they often failed to kill the parasite. At the same time they not infrequently caused toxic reactions usually mild, but occasionally accompanied by manifestations such as nausea, vomiting and muscular pains, which complicated the symptom picture.

In short, at the time of this study acute schistosomiasis was a poorly understood clinical entity with protean symptomatology and no certain objective means of evaluating severity or progress, for which the only remedy was not completely efficacious and was often somewhat toxic. One did not know how to be sure a patient was cured, or what part of the symptoms of a given patient at a given time were due to the parasite, what part to the treatment, and what part to his emotional reactions. Disposition policies were in a state of flux necessitated by

changing understanding of the disease. The result was an atmosphere in which rumors flourished and disability-producing attitudes thrived.

II. RESULTS

A. GENERAL SURVEY

The study group consisted of a random sample of 50 patients who had had schistosomiasis proven by the finding of ova in their stools, who had had one or more courses of treatment with antimony compounds, and who had been hospitalized continuously for a long period of time. They had all passed the acute stage. When it was bruited about that there was an opportunity for a psychiatric interview, a few patients asked to be seen by the psychiatrist, and a few were referred specifically as psychiatric problems. Although the information obtained from these patients influenced the considerations to be reported, they are not included in the statistical summary of the results. Each patient was seen for a single interview lasting one-half to one hour. The results obtained from this interview were supplemented with information from the clinical record.

The average hospital stay of these patients at the time they were seen was 105 days, with a range from 68 to 148 days; that is, the shortest period of hospitalization was something over two months, the longest almost 5 months. These abnormally long periods in hospital resulted from the need to observe the patients for a sufficient period to determine the effectiveness of treatment.

Schistosomiasis was the main reason for hospitalization for all the patients studied. However 15 had other pre-existing or concomitant organic disease such as hookworm, amebiasis, and hepatitis, and 6 showed evidence of pre-existing psychoneurosis or simple adult maladjustment. It is believed that these more or less incidental findings did not appreciably influence the results.

With respect to the treatments given, 40 of the patients had received fuadin, 10 of them after a course of tartar emetic. The remaining 10 had received tartar emetic alone. Toxic reactions occurred during or immediately following 18 of the 20 tartar emetic treatments. Although less frequent after fuadin, they were not unusual, being

reported in 27 of the 40 patients receiving this drug. Almost all these patients were seen several weeks after the last course of treatment so that acute toxic reactions played no significant part in the findings.

Of the 50 patients, 35 were hospitalized because they had clinical symptoms of schistosomiasis sufficiently severe to cause them to report to sick call. The remaining 15 were hospitalized on the basis of ova found in their stools on routine surveys. No relation between the severity of the original attack and the degree of disability at the time the patients were seen could be determined.

B. CLINICAL STATUS

An overall evaluation of the degree of disability of each patient based on history and impression at the time of the examination was attempted. Although this estimate may have been highly inaccurate for some individuals, it indicated a clear trend which is felt to be reliable. This was that the vast majority of the patients were neither in robust health nor strikingly incapacitated. Only 2 were considered to be so sick as to require further hospitalization. One of these was a severe hypochondriac the major part of whose symptoms long antedated his schistosomiasis. In the other a large functional element was suspected but could not be proven. At the other extreme only 2 patients seemed essentially symptom free and ready for full combat duty. All the remaining 46 were judged able to perform at least light non-combat duty, but still not entirely restored to health.

Objective findings attributable to schistosomiasis were infrequent. Only 7 of the 35 patients who were checked in this respect had physical findings which might possibly have been due to the disease. Of these, 5 had palpable cervical glands, one a palpable liver and one a palpable spleen. As regards the laboratory findings, only one stool showed mature ova and 3 immature ova, the remaining 46 being negative. Only 2 patients had a total leucocyte count over 15,000. Eosinophilia was not uncommon, being over 5% in 38 patients and over 15% in 10. Subjective symptoms, usually of a mild sort, were as common as objective findings were rare. Although in many cases they were elicited

only by direct questions, only one patient produced no symptoms at all.

By far the most common complaints were weakness or fatigue, present in 40 patients, and shakiness, reported by 35. These two usually occurred together, the patient complaining that they came over him in waves, or that he became shaky on mild exertion. Next most frequent were headaches, which occurred in 23, upper abdominal cramps present in 19, blurring of vision found in 12, aching or stiffness present in 11, insomnia in 11, irritability in 9, and restlessness in 9. Of the less frequent complaints, 5 patients complained of loss of appetite, 5 of epigastric swelling, 4 of chest pains, 4 of loss of interest in things, and 3 of concentration difficulty.

The most striking characteristic of the more frequent symptoms was the inability to allocate the relative rôles of parasitical infestation, antimony, and psychogenic factors in their production. Some of the rarer ones, such as insomnia, restlessness, loss of interest, irritability and concentration difficulty, would appear to be essentially expressions of emotional tension. Blurring of vision and stiffness or aching of muscles and joints occur as acute toxic effects of antimony. Whether their continued presence long after the drug has presumably been totally excreted may still be attributed to this, is doubtful. The most prevalent symptoms however—weakness, shakiness, headaches and epigastric cramps—could be caused by any combination of several factors. All are frequently seen on a purely psychogenic basis. On the other hand, epigastric cramps and headaches are bona fide symptoms of schistosomiasis, and some patients reported that shakiness and weakness occurred only during treatment, stopping soon after antimony was discontinued.

A further factor which must be considered in the evaluation of these symptoms is the effect of long hospitalization *per se*. Questioning of a small group of ambulatory surgical patients without schistosomiasis who had been hospitalized several weeks showed that a large proportion complained of weakness and shakiness, the most common complaints of the patients with schistosomiasis. A recent study of soldiers hospitalized for many months following hepatitis stresses the

prevalence of the same symptoms, presumably on a psychogenic basis(1).

In summary, it seems likely that a considerable part of the incapacity of these patients was not directly related to schistosomiasis, but should be attributed to such factors as emotional strain and the effects of prolonged hospitalization.

C. ATTITUDES

In an attempt to gain an understanding of the emotional stresses under which many patients seemed to labor, questions were asked about such topics as the disease itself, the treatment, the ward officers, the problems of immediate disposition and the more remote future and, finally, about the sources of the information that the patients had accumulated and its effect on them. In evaluating the answers to these questions it must be kept in mind that the situation was not conducive to frankness. Most patients knew that the interviewer was a psychiatrist, which at once tended to put them on the defensive. An effort was made to circumvent this difficulty by explaining to the patients at the start of the interview that they had been picked at random, not because it was felt that the ministrations of a psychiatrist were needed, that the purpose of the interview was to get information on attitudes which would be helpful to all concerned in planning future treatment, and that nothing they said would be entered in their clinical record. Although most patients seemed to accept these statements and replied in good faith, it may be assumed that some patients suppressed unfavorable attitudes and opinions. On the other hand those who seemed most distrustful of or hostile towards the interviewer were usually the ones who expressed themselves most freely. So all in all the results obtained probably bear a reasonable approximation to the actual state of affairs.

These men displayed the attitudes which might be expected to develop under the circumstances in which they were placed. Their illness had begun usually, with an unpleasant array of symptoms, which had been compounded by the discomforts of treatment. This had been followed by a necessarily lengthy period of hospitalization with ample time to brood and daydream. Due to the

large number of patients under treatment, there was little opportunity for the individualized reassurance which might have counteracted unhealthy preoccupation. Material for worry was supplied at every turn. Treatment was prolonged and uncomfortable, then might be repeated after it was supposed to be finished. Disposition appeared to the patients to be arbitrary and capricious—some men were said to have gone home, others went back to their units, still others were discharged and then showed up in the hospital detachment. The air was full of information and misinformation, and there was no way of separating the wheat from the chaff. The information supplied by doctors seemed to be contradicted by radio broadcasts which took an alarmist view of the illness in order to discourage bathing in infected streams. Some men wrote to friends at home to look the disease up and write them about it, others found an article in an encyclopedia or read the circular that came in the packages of fuadin. Every man tossed his scrap into the witches cauldron of rumor.

The dominant attitudes which appeared in this setting were resentment, anxiety and confusion. In only 7 patients could none of these three clearly be detected, and in several of them it was felt that these attitudes were present but concealed. Thirty-three patients or just two-thirds expressed some resentment, and 24 each indicated some degree of anxiety or confusion.

With respect to their feelings about their present condition, only 2 patients were willing to say categorically that they thought they were cured. On the other hand, 26 were convinced that they still had the disease. The remaining 22 were undecided, but most leaned towards the belief that they were still sick. As might have been expected the chief reason given for disbelief in a cure was that they still didn't feel well. These doubts were fortified by the non-committal attitude of the ward officers, and by the re-treatment of some patients after an interval.

Uncertainties about cure were frequently accompanied by concern about the future, a worry admitted by 31 patients. However, the attitudes taken towards this varied widely. Some patients were frightened and depressed. Others seemed mainly concerned that the

Army care for them until they were well. A few took a highly realistic and sensible attitude. For example, one, who had made a good recovery from cerebral schistosomiasis, stated that he was making plans to open a toy store in connection with his uncle's lumber yard, if his strength did not return sufficiently for him to go back to his old job as carpenter.

Lack of faith in cure was paralleled by lack of faith in the treatment. Only 23 patients, or slightly less than half, seemed convinced that the treatment had helped them. Twenty-two were uncertain. The remaining 5 believed that the treatment had left them worse off than they were before. As has already been pointed out, treatment was of necessity experimental to the extent that the most effective dosage and compound of antimony in fresh schistosomiasis infections had not yet been worked out. Most of the patients were aware of this, 28 being willing to express the belief that they had been used as "guinea pigs." It is believed that this opinion was more nearly universal than this figure suggests. It is difficult to tell a medical officer that one believes other medical officers are experimenting on him. The significant point is that 17 of the 28 who thought they were being experimented on recognized the necessity of this and seemed to harbor no resentment. Typical remarks expressing this attitude were: "We have been guinea pigs of necessity. Experiments have been made with our welfare in mind." "Someone had to be in on it to keep someone else from getting it. Someone had to give it a trial." "If they ain't got no cure for it they might as well practice on me as anyone." "If it's necessary for them to experiment on me to clear it up, it's the best they can do."

The patients' doubts and uncertainties were also reflected in their attitudes towards the harassed ward officers caring for them. Only 12 seemed to have full confidence in their physicians. On the other hand, 15 made unfavorable comments and the remaining 23 wouldn't commit themselves. Of this group some may have been afraid to express their views. The criticisms were directed chiefly at four points. The first of these, a clear manifestation of anxiety and uncertainty, was that they were not being kept sufficiently informed about the treatment: "I'm

disgusted. Nothing ever seems to be done. We just keep around and they keep doing something to us and we don't know what's going on." "I know I'm being used as a guinea pig. I felt kinda peeved at first but I can't do much about it." "Everyone would have felt a lot better if they explained it first."

The second criticism was directed at what was felt to be a lack of consistency: "They say it isn't serious, yet they keep us around here and won't let us work." "They tell you one thing one day and kind of contradict themselves. Like they say the sickness is all in your head, and then they want to give you more shots." "If they told me I was completely cured, I don't see any necessity for being kept under observation. If they're going to keep me under observation they deny themselves."

The third complaint was that ward officers appeared insufficiently interested: "When a man tells you a pain you can't stand is in your mind, you know the feeling you get." "I tell them something and they just pass it off as though it didn't exist." "You go to a doctor with a little complaint and he says its schisto. I feel I might as well be talking to myself." These comments were, of course, a reflection of the insecurity and irritability of the patient rather than of the actual attitudes of the ward officers, who gave as much individual attention as possible under the hectic conditions which prevailed.

Resentment in a very few patients, finally, reached such a pitch as to result in the absurd suspicion that the physicians were trying to make a name for themselves at the patients' expense: "The talk is going around that someone is trying to make a name for themselves. It's logical. We're in no position to act on it."

With respect to attitudes towards disposition, perhaps the most significant finding was that in spite of the prevailing atmosphere of invalidism, only 30 patients expressed a wish to be sent home. Many felt that all that mattered was to regain their health, and that they preferred to stay in this theatre if this result could be achieved here. One motivation which played a part in this attitude was unwillingness to distress their families by returning home as invalids. Another was

a feeling of responsibility to comrades still fighting. For some patients, being invalided home was equivalent to deserting their friends. Such men pleaded to be returned to their organizations, or failing this, to be allowed to support their comrades by working in rear areas.

From the standpoint of rehabilitation the most important fact about the attitudes towards disposition was that many of these patients were receptive to the thought of remaining at some form of duty in this theatre. The unconfirmed possibility of being sent home was probably more disturbing than definite knowledge that they were to remain here would have been.

D. INFORMATION

The patients' understanding of schistosomiasis varied widely, but on the whole it was poor. Of the 50 patients, only 12 were considered to be well informed about the disease. Their knowledge was accurate, with an adequate evaluation of those aspects of schistosomiasis about which no certain knowledge exists. Ten patients had only very meagre and usually inaccurate information. They seemed to have remembered primarily the alarmist rumors. The remaining 23, or about half, had a certain amount of accurate knowledge heavily spiced with rumor and conjecture.

One item used as a check on how well these patients were informed, was whether or not they knew that the worms could not reproduce in the body. This fact is particularly significant because it can be used therapeutically as evidence for the self-limited nature of the disease. Of the 50 patients, 17 were sure that the worms did not reproduce, but 6 were sure they did, and 27 didn't know. It was disconcerting to discover that quite a few of these admitted having been told by the doctors that the worms did not reproduce, but stated that they didn't know whether to believe it or not. In other words, they had reached the point of doubting anything from any source.

Although a certain amount of confusion was inevitable in as poorly understood a disease as schistosomiasis, part of it was attributable to inability to control the dissemination of information. There were many

sources which sometimes contradicted each other, and the implications of the material presented were not always adequately clarified. The chief sources of information were rumors, the statements of the doctors, the radio broadcasts cautioning men to stay out of streams, and an exhibit of the disease, either a travelling one or one presented at a lecture by a member of the staff of the hospital. A few patients had managed to read about the disease in an encyclopedia or a text on tropical medicine, and some had seen the circular accompanying the fuadin ampoules. Of the major sources, all but the physicians apparently increased apprehensiveness or resentment rather than allaying it. Even the doctors were felt to be reassuring by only 19 of the patients. All other sources were universally reported as either neutral or upsetting in their effects. These may be considered briefly in turn.

The rumors which seemed to make the most impression were either those connected with immediate disposition or those concerned with future disability. Fifteen men thought they knew that some patients had been sent home, and 13 had picked up the notion, to support this, that the disease shows a more rapid recovery in a cold climate. A chance sentence in *Time* magazine about dogs with schistosomiasis being rushed to the U. S. by plane was the source of this. Twelve men reported the rumor that one would soon die of the disease, 8 that it made one a permanent invalid and 12 that it produced prolonged invalidism.

The radio broadcasts were highly colored statements of the supposedly disastrous effects of schistosomiasis. While the broadcasts were fully justified by their striking success in stopping the further spread of the disease, their effect on those few who had already contracted schistosomiasis were often unfortunate. This was not only because of their alarmist nature, but because they contradicted other more reassuring sources. Since the voice of radio always carries a certain authority, the result was to produce confusion in the patients minds: "Either the radio or the doctors are screwed up about something. I suppose the doctors are right, but then I suppose the doctors write the radio program." "They tell you in the hospital schistosomiasis isn't serious. On the

radio they say it kills. That breaks down the morale of the fellows who got it." Because of this aspect, these broadcasts were discontinued at about the time this survey was undertaken.

The schistosomiasis exhibit occasionally alarmed patients who had not realized that it required massive or repeated infections to produce ascites or destroy livers. This point, if clarified, could perhaps have been turned to good advantage, by pointing out how much better off the patients, with their single brief exposures were by contrast.

The only important criticism made of the information supplied by doctors was that it was so extensive as to be confusing. As one man put it: "The doctors gave us so much information it got all balled up in my head."

The question arises as to the desirability of trying to inform patients about their illness. A few of these patients apparently tried to combat their anxiety by attempting to shut their minds to knowledge of their own condition or of the disease itself. One man said: "I think I shouldn't be told (about my stools) for my own peace of mind. If you told some their stools were normal and didn't tell others, the others would worry." Another put it more simply: "What you don't know won't hurt you." As might be expected, this "head in the sand" attitude was seldom successful. Most patients maintaining this pose were mines of alarmist rumors. The majority showed a desire for information, based on a realistic and healthy attitude, expressed in such terms as: "I'm old enough to know the truth. If I'm going to die tomorrow I've faced it before." Since all patients, regardless of their expressed attitudes, were certain to pick up information in one way or another, and since accurate knowledge, even if not entirely roseate, is one of the best antidotes for anxiety, efforts to give patients accurate and clear information about their illness would seem to be fully justified.

E. INDIVIDUAL REACTIONS

The reactions of the individual patient to schistosomiasis were of course determined not only by the circumstances already discussed, but by his own personality and attitudes. He tended to seize on those aspects

of the situation which fitted in best with his own preoccupations. The following two cases, one of whom reacted primarily with anxiety and the other with hostility, may serve to illustrate this point.

CASE 1.—This 20-year-old infantry man was apparently infected by marching through rice paddies. He had a moderately severe onset with pain in his eyes and back of his neck, stiffness, chills and fever. He received nine fuadin treatments. At the time he was seen he had been 128 days in the hospital.

In the interview he made the impression of a youth who has been accustomed to the society of older people and was at ease with them. His dominant mood was one of apprehensiveness, and he appeared somewhat depressed. His opening words were, "I hope you don't think I'm crazy." He complained of constant headaches, extending down the back of his neck, anorexia and shakiness, and difficulty concentrating. He spoke of his "overall weakness" and easy fatigue. Finally he complained of anxiety dreams, of which an example was trying to fire his pistol at charging Japs but being unable to pull the trigger.

A brief survey of his background revealed him always to have been a seriousminded, insecure type of person. He described himself as "not frivolous." As a child he walked in his sleep, feared spiders, and for years had a light burring all night in his bedroom. Although he had had no serious illnesses, his health had never been robust. He was taking a premedical course at the time he was inducted, which may have been related to his exaggerated concern over his condition. It is interesting to note the patient's statement that in combat on Leyte and Samar: "I was surprised to find that I wasn't frightened at all." In other words, the enemy seemed to have been less of a threat to him than a bodily illness.

With this background of anxiety and hypochondriacal tendencies, it is not surprising that, despite a good intelligence and the fact that he had a clear picture of the pathogenesis of the disease, he tended uncritically to accept all alarmist rumors. An example was: "One doctor was supposed to have told one of the fellows that untreated you have 5 years to live, treated you have at least 20 years." He found the radio "kind of difficult to reject, since it comes from the same official source as the other things come." He was chiefly worried by his persistent weakness and wondered if he would ever feel better. He was open to the thought that the doctors didn't know what they were doing, but "if it's necessary for them to experiment on me I suppose it's the best they can do." He didn't care whether he was sent home or not, as long as he was cured.

CASE 2.—This 25-year-old combat engineer apparently contracted the disease by swimming in an infected stream. He had a moderately severe onset with cramps, backache, aching in his bones and moderate diarrhea. He had received both tartar

emetic and fuadin. When seen he had been 111 days in the hospital.

His attitude in the interview was one of brash cheerfulness, with an undercurrent of suspiciousness and hostility. He showed no anxiety in his manner. He tended to use a vocabulary above his educational level and made a great show of superficial but poorly digested information, in general giving the impression of striving for effect. He was essentially symptom free, but stated that he felt a little shaky at times, occasionally slept poorly, and was somewhat sluggish for lack of exercise.

He was a Mexican whose life had been dominated by an urge to "independence," and defiance of authority. He described himself as an "individualist." He left school early in order to achieve financial independence, and made a great point of saving his money, as a means of being self-sufficient. He changed jobs frequently, usually because the new job offered more pay. Apparently he had a knack for picking up skills. His aggressiveness found an additional outlet in prize fighting.

In his four year army career he had repeatedly received recognition for his abilities, then lost it because of difficulties with those in authority. He reached the rank of 1st sergeant once, staff sergeant twice, and sergeant 3 times, according to his story. When seen he was a private and had been for a year. He stated that all his reductions in rank were due to refusals to obey orders he thought were unreasonable.

With this background, he met the threat to his future independence implied by schistosomiasis by attacking the doctors; the implication being that if he could discredit them he might be able to convince himself that he didn't have the disease after all. His opening remark made clear that his main concern was that he be able to make his own way when the army discharged him: "As long as I have schisto and they don't cure me I won't accept a discharge." The implication was that the Army planned to discharge him as an invalid. He tended to exaggerate rumors concerning the severity of the disease, in such a way as to hide his own anxiety by making it seem ridiculous. The following typical statement was made in a tone not of alarm but of scorn: "They said I was cured but from what I read and heard on the radio I don't believe it. It's liable to wreck your brain or to paralyze you. The encyclopedia says it can give you cancer." He seemed bitter because he wasn't allowed to examine his own stools before treatment was started, and said flatly: "They treated me without showing me I had it, just on their own word. I still believe I didn't have it. The doctor himself told me I was a guinea pig. He may have been joking but that wasn't the time to joke. I would like to tell a few of the doctors what I think."

III. DISCUSSION

It seems clear from this survey that worry, resentment, lack of confidence, and similar unhealthy attitudes have been at least partly

responsible for the prolonged disability of patients who have had schistosomiasis. The reduction of invalidism in this disease as in all others depends not only on the administration of the proper drugs, but on the maintenance of the proper therapeutic atmosphere. The most important healing attitudes seem to be faith in the physician and expectancy of recovery, which in the Army implies expectancy of return to duty. Certain directions in which efforts to encourage these attitudes may profitably be expended are suggested by this study.

With respect to expectation of recovery, it should be pointed out that in the Army hospitalization often represents a rather desirable state, in contrast to hospitalization in civilian life. The hospitalized civilian has powerful incentives drawing him towards recovery. Leaving a civilian hospital means terminating the expense of hospitalization, returning to the emotional support of one's family, and resuming gainful work. In the Army, hospitalization not only involves no financial sacrifice but is sometimes a refuge from arduous or unpleasant military duties. In addition, there is always the hope that if one remains sick long enough, one may be sent back to the United States, a hope encouraged in schistosomiasis patients by rumors that some had already been sent home. These factors are counteracted to some extent by the strong desire to regain one's health, present in almost everyone. In addition, it is often possible to appeal to the individual soldier's self-respect in at least two ways. One is through his feeling of responsibility to his comrades, whom he may feel he is letting down by remaining an invalid. Another is reluctance to be discharged from the army with a certificate of disability. This implies worrying his family, perhaps a handicap in obtaining work, and the problem of explaining to civilians why he is not in uniform when his friends are still fighting.

Maintaining the patients' faith in the physician, which is an automatic matter in illnesses which are well understood, becomes a real problem in relatively unknown conditions like schistosomiasis. Since each patient reacts to the situation in accordance with his own particular needs, the obvious first requisite is to regard each patient as an individual.

A few minutes at the end of the initial examination devoted to discovering and attempting to meet the patient's personal worries are usually well worth while from the standpoint of creating a good therapeutic relationship.

■ Confidence is best maintained by creating a situation in which the patient relies on his physician as the main source of information.

The purpose in presenting information is not primarily to instruct the patient, but to create in his mind the feeling that his physician has fully grasped his condition and has the entire situation thoroughly in hand. Therefore the material should be selected with a view to stressing those points which are most likely to have this effect. An attempt to give the complete picture of the disease, as one might to a group of medical students, often only creates confusion by swamping the patient with more facts than he can digest.

Those aspects of the disease which lend themselves to an optimistic interpretation should be emphasized. One such in schistosomiasis is that the flukes cannot multiply in the body. It will be remembered that only a third of the patients seen had fully grasped this fact. It was found that clarifying this for patients who had not appreciated its significance had a powerfully reassuring effect in many instances.

While the presentation should be as optimistic as is consistent with accuracy, false optimism should be avoided, since it often tends to decrease the patient's confidence. For example, one patient stated he lost all confidence in his physician when he said that schistosomiasis was no worse than a bad cold.

When potentially alarming information is presented, as it must be at times, in order to counteract even more alarming rumors, the mitigating aspects should be stressed. Thus, of the schistosomiasis patients who saw pictures of Filipinos with ascites or a liver destroyed by parasites, very few realized that this was the end result of repeated or massive infestation, in contrast to their own brief and limited contacts with the parasite. Similarly, while it is futile to deny the existence of severe reactions since patients quickly learn of them, it can be pointed out that, with rare exceptions, they seem to occur only at

the time of the original infection. Patients who have had the disease for several weeks without a severe reaction need not fear one.

When uncertainty exists, it is better to admit it than to offer reassurances which time is apt to disprove. However, it is important to specify carefully the area of uncertainty and to indicate the means by which it is to be minimized. In schistosomiasis this problem is most acute with respect to the question of cure. If the patient is led to believe that a course of antimony will cure him and then the treatment must be repeated, his confidence in the doctor is certain to suffer. On the other hand, an admission that a single course of treatment, while helpful, might not be curative and might therefore require repetition would have allayed rather than increased anxiety in many patients. At least it would have helped to counteract the demoralizing and completely groundless belief of some that they were being irresponsibly experimented on.

In general, in an unfamiliar disease the question of prognosis should be formulated in terms of ability to perform one's duties rather than in terms of cure. The patient with schistosomiasis should be told that the presence of a few parasites is perfectly consistent with full efficiency, that he will be checked at regular intervals, and more treatment given if indicated. The situation is closely analogous to that of tuberculosis. Many patients with this disease are able to face life with confidence in the presence of obviously persistent infection. In this connection a rehabilitation program, such as that found in many army hospitals, is of the greatest value. Such a program effectively combats the physical and moral deterioration resulting from prolonged inactivity. It not only helps to restore muscle tone but reduces the time available for fretting. By its very existence it creates a stronger expectation of recovery in the mind of the patient than merely verbal reassurance.

In poorly understood diseases one must be alert to the appearance of new rumors. These are constantly emerging as patients seize and elaborate upon any scraps of information which present themselves. Meeting rumors promptly not only stops the spread of false information, but tends to consolidate the physician's control of the situation.

The importance of consistency need hardly be stressed. Contradictions between authorities are obviously highly destructive of confidence. In an army setting care must be taken that ward officers do not contradict each other or other supposedly authoritative sources such as the radio. Self-contradictions are at times difficult to avoid when knowledge is constantly changing. The danger can be minimized by presenting only what is definitely known at a given time, and avoiding speculation.

IV. CONCLUSION

This survey indicates that patients suffering from unfamiliar diseases, of which schis-

tosomiasis is an example, tend to develop emotional reactions which impede recovery, such as anxiety, resentment and confusion. To keep disability at a minimum, therapeutic efforts must be directed not only to overcoming the pathogenic agent but to maintaining the patient's confidence in the physician, and encouraging his expectation of return to useful activity.

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PROGNOSIS OF WAR NEUROSES WITHOUT PSYCHOTHERAPY¹

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The primary objective of this study was to determine which war neurotic enlisted personnel admitted to a convalescent hospital could be expected to return to duty in a relatively asymptomatic state with only occupational (convalescent) therapy, but without specific psychotherapy.

PATIENTS AND METHODS

The patients were Army Air Forces enlisted personnel, flying and non-flying, returned from overseas duty in various theaters throughout the world. Approximately 2½ months had elapsed between the completion of active duty and arrival at this zone of interior convalescent hospital. This interval consisted of about 5 weeks from relief of duty to arrival at port of entry; 4 weeks furlough plus travel time, and one week at a redistribution station. Fifty-six men of the total series of 61 followed this course. Of the remaining 5 patients, 3 had been evacuated from overseas theaters as psychiatric casualties, and 2 were admitted from continental command hospitals after serving a few weeks duty following reassignment from a redistribution station.

These 61 consecutive cases were admitted to a special ward from the receiving ward of this convalescent hospital during a six-day period. They were unselected, except for 2 men who were excluded from this special ward because of marked alcoholism and disorderly conduct while in the receiving ward. Three of the 61 patients admitted to the special ward were dropped from the study, due to extended furloughs during the period of observation in two cases, and gunshot wound of the stomach in the third instance. Thus, 58 patients were left for consideration.

Each of these men was initially interviewed for 45 minutes on entry to the special ward for history taking. A ten-minute progress interview was conducted after 2 weeks; and at the month's end each was carefully studied to determine clinical improvement and other data. At no time during the month

was any attempt made to deal with material brought up in the interviews, nor was a close doctor-patient relationship encouraged. The men were pushed into convalescent activities, which were stressed as the principal therapeutic measures.

The data obtained dealt with the following factors:

1. Quantity and type of symptoms of anxiety.
2. Predisposition.
3. Overseas stress.
4. Results of hospital stay.

DEFINITION OF TERMS

Anxiety was graded into four degrees. Sharp gradation was obviously impossible, but any medical officer with experience in treating sizable numbers of war neurotics has no difficulty in such rough quantitation. Care must be taken, however, to include the amount of anxiety bound by hysterical conversion symptoms, or concealed behind a schizoid façade, alcoholism, compulsive rituals, etc.

Predisposition was taken to mean the character of the soldier existing prior to enlistment, predisposing to the precipitation of war neurosis under military stress. This character, in turn, is the resultant of constitutional and early environmental factors operating to produce potential or actual neurosis in civil life. The environmental predisposing factors include the familial, cultural and economic influences acting upon the individual to produce neurotic traits in childhood and evidence of maladjustment in later years as revealed by the personal, school, work and medical histories. The degree of predisposition was roughly graded into four divisions: minimal, mild, moderate and severe. The severest predisposition represented a combination of factors culminating in a full-blown civilian neurosis. An important feature in the total picture of predisposition is ego strength, an index of which may be gained from the success of the ego in mastering early neurotic conflicts in the later years.

¹ From the A. A. F. Convalescent Hospital (Don Ce-Sar), St. Petersburg, Florida.

Overseas stress was divided into combat and non-combat types, and combat stress was quantitated in three degrees. Non-combat stress indicated that the patient had not been exposed to enemy action and had usually been stationed in areas outside the combat zone, *e.g.*, Greenland. There were no flying personnel in this group. Combat stress involved both ground and flying personnel; the former encountering enemy action by being bombed or strafed on the ground, and the latter primarily by the enemy action encountered by bomber crews. Quantitation of combat stress ranged from mild, which might involve undergoing a few air-raids, to severe, wherein a flyer might have undergone a severe tour of combat missions, including crashes, bailouts, or escape from enemy-occupied territory.

Improvement was expressed in terms of fitness for military duty. Only two categories were used: markedly improved or relatively unimproved. The former showed progressive clearing of signs and symptoms under observation or continuation of improvement begun before entering the hospital.

RESULTS

1. *Improvement*:

Markedly improved	26% (15 cases)
Relatively unimproved	74% (43 cases)
2. *Anxiety*:

	Improved (15 cases)	Unimproved (43 cases)
Minimal	20% (3)	..
Mild	73% (11)	39% (17)
Moderate	7% (1)	42% (18)
Severe .....	..	19% (8)
3. *Predisposition*:
 - a. *Degree*:

Minimal	33% (5)	4% (2)
Mild	53% (8)	16% (7)
Moderate ...	14% (2)	30% (13)
Severe .....	..	50% (21)
 - b. *Ego strength (how well ego dealt with early predisposition)*:

Poorly .....	..	33% (14)
Moderately ..	27% (4)	53% (23)
Well	73% (11)	14% (6)
4. *Overseas stress*:
 - a. *Type*:

Combat	100% (15)	81% (35)
Non-combat . .	..	19% (8)
 - b. *Degree of combat stress (excluding 8 non-combat cases)*

Mild	20% (3)	20% (7)
Moderate ...	40% (6)	54% (19)
Severe	40% (6)	26% (9)

ANALYSIS OF DATA

The approximate one-fourth of the total series fell into the markedly improved group, characterized by:

1. *Mild Anxiety*.—93 percent, or all but one, of the improved cases showed minimal or mild anxiety, in contrast to 39 percent of the unimproved patients. None of the unimproved group was minimally graded.

2. *Mild Predisposition*.—86 percent of the improved group gave evidence of minimal or mild predisposition, whereas 20 percent of the unimproved group were predisposed to a like degree. Here again, the percentage of minimally predisposed patients was far greater in the improved group (33%) than in the unimproved (4%). Ego strength, properly a function of predisposition, was distinctly greater in the improved cases, of which 73 percent had successfully dealt with their early predispositions in later years, contrasted with only 14 percent of the unimproved men who had done so.

3. *Combat Stress*.—All of the improved cases had been subjected to some form of combat stress, whereas 19 percent of the unimproved group failed to answer this qualification. (None of this 19 percent were flying personnel.) The degree of combat stress, however, was not found to have consistent correlation with improvement.

DISCUSSION

No attempt was made to sort out the basic personalities, the neurotic syndromes existing prior to enlistment, or the reaction patterns to anxieties precipitated by overseas stress. Excessive dependency prior to military stress appeared to be the most common characteristic of all the men, being present in all the improved group and in at least 81 percent of the unimproved group. The degree of dependent regression found in all the improved cases decreased during the month under observation to a level approaching their individual pre-military levels, which, in turn, appeared to be greater than the expected average of a comparable group of non-neurotic individuals. It would seem that ego strength, in the improved group, had passed a critical point following which improvement had steadily proceeded.

In 2 of the improved cases, some of the improvement was attributed to recovery from reaction produced by home situations confronting these returnees during their recent delay en route.

Neurotic syndromes, containing varying degrees of anxiety, were diverse and overlapping. Nearly all evidenced psychosomatic concomitants of anxiety. Some converted their anxiety by hysterical mechanisms. In others, there were relatively fixed premilitary characters or neuroses, including very rigid personality, constitutional psychopathic personality, compulsive-obsessive neurosis and neurasthenia. Those with the last-named personalities or neuroses, as might be expected, fell into the unimproved group.

It is interesting to note that 100 percent of the total series could be said to have anxiety irrespective of the type of syndrome presented. Anxiety, therefore, may be used as the most practical yardstick in measuring the clinical severity of this group. There must be added to the free anxiety that fixed by hysterical conversion, concealed by ritualistic defenses or alcoholism, or not well incorporated by the ego, in which case the patient may appear withdrawn, confused and schizoid. The positive correlation of lesser degrees of anxiety with improvement might have been expected, since large quanta of anxiety in a patient far removed in time and space from the precipitating stress must necessarily indicate a severe degree of sustained psycho-physiological disruption.

Predisposition to breakdown under military stress has long been recognized as a very important factor in the histories of war neurotics. In this war, a past history of neurotic symptoms was found in approximately 90 percent of naval war neurotics, both in combat and non-combat overseas personnel, by Schwab, Finesinger and Brazier.² This was in sharp contrast to their positive findings in only 17 percent of a control series subjected to essentially the same combat stress without developing war neuroses. These findings are in accord with the present study where all patients presented evidence of predisposition, with the

degree greater in the group failing to show significant improvement without psychotherapy. Possibly the reason why all of these cases showed predisposition, whereas only 90 percent of Schwab's series did, is that neurotic symptoms were the criteria in his group, whereas excessive dependency was also taken as an indication of predisposition in the present study. The same prognostic relationship of relatively mild predisposition to recovery was also found by Grinker and Spiegel³ in acute war neuroses seen in combat zones soon after breakdown had occurred.

The *type* of overseas stress, combat or non-combat, appeared to have practical prognostic value in this study. Schwab and Rochester,⁴ in evaluating a group of naval war neurotics under specific treatment for 4 to 6 weeks in overseas hospitals, concluded that those with combat precipitated neuroses showed a greater tendency to recover than did a group with neuroses developing under non-combat conditions. This holds true in the present study, since none of the men with non-combat precipitated neuroses fell into the improved group. Comparison of these two studies is not strictly valid due to variations in treatment, etc., but the inference is interesting. When the *degree* of combat stress is used to determine prognosis, it is difficult to estimate the degree because the nature of the stress is far from uniform. In this study, such quantitation did not sharply favor either the improved or unimproved group. Close to the scene of battle such a quantitation might be undertaken with some success. Grinker and Spiegel³ found that the greater the precipitating trauma necessary to produce a war neurosis, the better the outlook for recovery. But at this hospital, remote in time and space from the precipitating trauma, it is not feasible to determine the degree of stress other than by dividing the men into those exposed to enemy action and those not so exposed. Furthermore the fallacy in grading stress objectively is that no account is taken of the

² Grinker, R. R., and Spiegel, J. P.: War neuroses in North Africa. Josiah Macy Foundation, 142-148 (September), 1943.

⁴ Schwab, R. S., and Rochester, H.: Prognosis of psychoneurotic breakdowns. War Med. 7:12-22 (January) 1945.

² Schwab, R. S., Finesinger, J. E., Brazier, M. A. B.: Psychoneuroses precipitated by combat. U. S. Nav. Bull. 42:535-544 (March) 1945.

specific relationship between individual predisposition and a certain type of stress. For instance, an objectively mild stress might produce great anxiety in a man specifically predisposed to just that type of stress, whereas far greater stress as determined objectively might not unduly disturb him.

CASE HISTORIES

Three cases are presented: two are illustrative of those improving markedly without psychotherapy, and one typifies those who remained unimproved.

CASE 1.—Marked improvement in a patient with mild predisposition and anxiety, and without symptoms overseas until exposed to the threat of enemy action.

A 29-year-old supply sergeant of an Air Force service unit served 11 months in the North African campaign without exposure to enemy action. He remained asymptomatic despite subsisting on unpalatable "C-rations." His unit was then transferred to England, where he was subjected to frequent air-raid alerts and the threat of buzz bombs. After a few weeks of this, he felt tense and gastric psychosomatic concomitants of anxiety appeared: his "stomach felt tight" and ached, and there was anorexia and nausea at the sight of food. Nevertheless, he gained weight by drinking large quantities of milk, which had been denied him in Africa. These symptoms persisted until he was admitted to this hospital about one year after onset. During his furlough at home, following his overseas tour, he was irritated by his mother who tried to force him to eat and babied him. The return to military life seemed to relieve him, and the trend of improvement continued throughout his hospital course here. On admission his appearance suggested mild tension and restlessness; his complaints were anorexia, nausea at meals, and pain and fullness after meals, referred to the epigastrium. X-ray examination of the upper gastro-intestinal tract was reported negative for organic lesions.

Past history revealed that he was the "baby of the family." Both parents were overprotective and protective, pushing him when he hesitated. In childhood he depended heavily on them, but in his teens he was able to achieve considerable emancipation. His school, work and sex histories were not exceptional. At the age of 15 years, he had a dyspeptic illness lasting several weeks, characterized by anorexia and nausea, apparently caused by a food fad in which he indulged at that time. This was the consumption of large amounts of rich cream. He said, "Mother told me I was a sick boy, but the doctor pulled me out of it by giving me a diet without any milk or cream."

During the month under observation, these symptoms cleared, and his diet, which had consisted largely of milk on entry, became balanced. In his own words, "Now I am weaned."

CASE 2.—Marked improvement in a patient with moderate anxiety but with minimal predisposition. Moderate combat stress.

A 25-year-old engineer-gunner of a B-24 completed his combat tour of 47 missions in the southern European theater in a period of 9 months. Despite undergoing several severe missions, he withstood combat stress very well until the last two missions, which were flown with a new pilot. The patient had great confidence in his own pilot, but went to pieces when he had to fly with the green pilot. On his final mission he was struck over the eye by a fragment of flak, and this further increased his anxiety. Symptoms were tension, restlessness, irritability, depression, insomnia, anorexia, startle, tachycardia, and palmar sweating and finger tremor. This picture largely subsided during his furlough following return to the United States, but reappeared on return to military life. On admission to this hospital the signs and symptoms noted above were present to moderate degree. During the period of observation, there was marked clearing so that he was relatively asymptomatic on return to full flying duty. The lifting of the depression appeared to be largely related to the arrival of his wife. His spirit in the fight for health was admirable. On entry, his dreams were largely regressive; but, as improvement proceeded, the theme turned to his struggle to regain his masculine strength.

Past history showed no evidence of pre-existing neurosis. He was strongly dependent on his father, who was his good friend and ego ideal. The patient was constantly with him, sought to please him, and depended on his leadership. The father's death, several years ago, left him shocked and depressed for a period of about 6 months.

In combat, his regular pilot represented the supporting father, and the sharp increment in anxiety following a change to a green pilot reflected the pattern of his earlier life. His increased dependent needs were largely satisfied while at home and again when his wife joined him at this hospital. Closely related to this gratification was the subsidence of his anxiety and the progression to a relatively independent state.

CASE 3.—Lack of improvement in a markedly predisposed patient who developed severe anxiety under moderate combat stress.

A 20-year-old engineer-gunner of a B-24 completed his tour of 35 combat missions in the northern European theater in 8 months. In the course of operational flying training in the United States he had been apprehensive and frequently airsick. In England, prior to his first combat mission, he saw a crash in which acquaintances were killed, and this produced marked fear of flying. His anxiety mounted steadily to a higher pitch during the course of his tour, and he drank heavily to keep going. Several severe missions were undergone, and the later missions were flown in a near-panic state. On return to the United States he found a distressing home situation. His wife wasn't sure if she loved him, and his son was boarded out to strangers. As he said, "When I

came back to the home I had dreamed of, my wife didn't cook for me or take care of me. She was too busy chasing other men." Throughout his hospital course he was markedly anxious and moderately depressed. He was very tense, there was marked manual tremor and generalized hyperhidrosis, speech was staccato, marked startle was present. He complained of anxiety attacks in which his "insides quivered." Combat dreams, insomnia and anorexia were prominent. Alcohol was often resorted to in order to aid sleep and relieve tension.

Past history was characterized by insecurity, anxiety and lack of dependent gratification. The father deserted the family when the patient was one year old. The mother remarried, but the step-father has always seemed a stranger to the patient. He was very closely identified with his mother, who is highly neurotic and has been under a doctor's care for several nervous breakdowns. He is the youngest of four brothers, but either felt rejected by them or rejected the support they offered. Enuresis was present until the age of 9 years. Nervousness has been in evidence as long as the patient can recall. In school he was seclusive, self-conscious, formed no close friendships with either sex, and stammered while reciting. At 15 years of age he quit school because of his anxiety in the presence of his schoolmates and went to work, unsuccessfully holding a succession of jobs. About 3 years ago he ran away from home and married a girl against his mother's wishes. The marriage went well for a year, but after he had joined the Army he heard that his wife was unfaithful, then he became depressed and drank heavily.

DISCUSSION OF CASES

A psychological profile may be sketched of the patient with good prognosis, as opposed to one with poor prognosis, by a consideration of these three case histories.

1. *Predisposition*.—Relatively mild neurotic predisposition is a vital characteristic of the patient with good prognosis. Of the improved cases, predisposition was mild in Case 1 and minimal in Case 2, but in Case 3 it was clearly severe. Both of the improved cases had been subjected to parental influences which were productive of excessive dependency, but each was able to adequately resolve the conflict of dependency versus independence prior to military service. And each was able to largely emancipate himself while under observation from the regressive dependency produced by combat stress. Contrast this with the third case, wherein the deserting father and the highly neurotic mother constituted extremely fertile soil for the development of childhood anxiety neu-

rosis. And the neurosis which developed was never successfully resolved by the patient. Poor recovery from the additional anxiety produced by combat might have been predicted by his failure to achieve freedom from anxiety in civil life.

2. *Anxiety*.—Relatively mild anxiety is an important feature in the patients with good prognosis. Case 2, with moderate anxiety, was the only one of the 15 improved cases with more than mild anxiety, so that this criterion remains valid. It is an interesting contrast that in Case 2 anxiety was not precipitated until after 45 missions had been completed, whereas severe anxiety in the unimproved case was precipitated by seeing a crash before a single mission was undertaken.

3. *Combat Stress*.—Combat as opposed to non-combat stress is a useful criterion in distinguishing a favorable from an unfavorable prognosis. The first case well illustrates how a mildly predisposed man may remain free from anxiety neurosis under non-combat overseas service and then break down under enemy attack. Hence, breakdown under non-combat conditions denotes considerable neurotic predisposition and is accompanied by a poorer prognosis. All of the cases in the series which did not undergo enemy action fell into the group with poor prognosis for a return to useful military duty. An illustration of the point that the *degree* of combat stress is not a reliable prognostic criterion is given by Cases 2 and 3. Each was subjected to essentially the same degree of stress, yet one recovered and the other did not.

CONCLUSIONS

A series of 58 war neurotic enlisted Air Force returnees from overseas theaters routinely admitted to a United States convalescent hospital were observed for one month without specific psychotherapy.

The primary purpose was to determine which patients could be handled without specific psychotherapy and be confidently returned to duty status in an improved condition at the end of hospitalization.

The results were as follows:

1. Of the series, 26 percent fell into the markedly improved group.
2. The principal factors having practical

prognostic value in the determination of candidates for this group were:

a. Mild anxiety, in the absence of anxiety-binding mechanisms.

b. Mild predisposition.

c. Combat stress rather than non-combat.

It is therefore suggested that in convalescent hospitals treating overseas returnees with neurotic symptoms, a preliminary psy-

chiatric screening be made by psychiatrists experienced in the diagnosis and therapy of war neuroses. By so doing a quarter or thereabouts of the patients may be legitimately treated without utilizing specific psychotherapy. The remainder will require individual psychotherapy with convalescent or occupational therapy as an adjunctive therapy.

EFFECTS OF HEAVY AERIAL BOMBARDMENT ON PRISONERS OF WAR

CLINICAL NOTE

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During the morning of May 15, 1944, American bombers dropped more than 2,500 tons of bombs on the Italian town of Cassino. Never before had so much destruction been concentrated in one aerial mission. It had been anticipated that the bombing would produce many acute neurotic reactions and concussions in the German parachute troops defending the town. The author was therefore detailed to observe for such effects the prisoners taken in the infantry attack which followed.¹

He examined some of the German paratroopers in a forward prisoner of war stockade within 4 hours of their capture. The remainder were seen in the main Fifth Army stockade, none of them later than 72 hours after capture. Formal physical, neurological and psychiatric examinations could not be made. However, it was possible to examine 20 prisoners in sufficient detail to determine the presence or absence of gross psychiatric or neurologic abnormalities. In 15 of these, abbreviated case records were made. It is felt that while the observations on which this paper is based are definitely incomplete, the theoretical interest of the subject, and the apparent absence of similar observations in the literature² warrant their being recorded in a brief clinical note.

PSYCHIATRIC FINDINGS

All prisoners were composed and calm. None showed evidence of continuing fear, of gross startle reactions, or of pathologic noise sensitivity. One prisoner complained of minor anxiety symptoms, but these were not of sufficient severity to constitute a pathological combat reaction. (His case history

will be given below.) Tremor was present in 8 of the group of 15 whose histories were recorded. Of these, 4 had tremor which was recorded as "slight," 3 had tremor which was labeled "moderate," and one had tremor recorded as "marked." This was the only important abnormal finding in these subjects. In summary, the bombing had produced in these prisoners no major anxiety reactions which had endured beyond capture and until the time of examination.

It was clear that some prisoners did not make frank statements. Thus, for example, certain of the subjects attempted to excuse and "cover up" tremor when it was present. Above all, they were anxious to avoid connecting it causally with battle stress.

The following cases are representative of the group:

CASE 1.—*No Reaction of Importance to Bombing and Capture.*—Prisoner No. 4, a 24-year-old *Unteroffizier* with 5½ years of army service, was a machinist in civilian life. Bombs nearly hit his concrete bunker three times, but he suffered no headache, chest pain, earache or loss of composure, according to his statement. At the time of the examination, 72 hours after the bombing, he had slight light sensitivity, but declared himself otherwise symptom-free. He showed no tremor, but exhibited some acrocyanosis of the hands.

CASE 2.—*Some Neurotic Traits in Civilian Life, but No Important Reaction to Bombing and Capture.*—Prisoner No. 9, an *Unteroffizier*, had been in *Wehrmacht* service 4 years. Despite near bomb hits on his bunker, he stated that he experienced no headache, earache or alteration of consciousness of any type, but had some momentary discomfort in the chest. He became "somewhat excited" at the time, but maintained composure. Seventy-two hours later, his hands were moderately tremulous, but his manner was calm, and he said that he had slept well since capture. He had been "somewhat nervous" all his life, with what he described as "a nervous heart ailment." He had tended to respond to excitement in civilian life with "heart pains," but he said that during the bombing such symptoms did not appear. He was a native of Graz (Austria), and had not been a mem-

¹ This attack did not succeed in taking the town of Cassino.

² It is not possible for the author to review the literature in his overseas station.

ber of the *Hitlerjugend*, but nevertheless considered himself a German, not an Austrian. He stated: "I fight because it is my duty. . . . I am too unintelligent to question about politics."

CASE 3.—*Some Continuing Anxiety Reaction to the Bombardment, but Within the Limits of Normal.*—Prisoner No. 7, aged 20, a grocery clerk in civilian life, had served in the *Wehrmacht* 2 years. He was in a water hole during the bombing, and had inadequate cover. Although "the concussion was terrific," he said he did not lose consciousness. In the prisoner of war cage during the night following his capture, he arose in a half-sleeping, confused state, to look for his field radio. During the following night, however, his sleep was undisturbed. He had never before experienced such an episode. He stated that when he heard planes overhead, he still felt constrained to go out of doors to investigate. He experienced no unusual reaction to other noises, and showed no startle reaction. His hands were markedly tremulous. He stated that he had never noted such tremor before.

IMMEDIATE REACTIONS TO THE BOMBINGS

Many of the prisoners admitted having been "excited" (*aufgeregt*), or "shaken" (*erschüttert*), by the bombing, but none would admit having been made "nervous." Their choice of words in describing their reactions is of considerable interest, emphasizing as it does the ephemeral and non-pathological nature of the response in their eyes. No prisoner admitted having lost composure, or having seen panic in others. All emphasized the protection and sense of security given by the excellent cover under which most of them were stationed.

SIGNS OF CONCUSSION

No prisoner showed gross objective evidence of concussion. None appeared dazed or showed disturbance of gait and coordination. Not one of them complained of headaches, earaches or pain in the chest at the time of the examination. Prisoner No. 9, who had been stationed in a bunker, and prisoner No. 12, who was in a fox-hole with no overhead cover, felt some thoracic discomfort during the bombardment. Aside from these statements, there was no indication that the immediate concussive effects of the aerial bombing on the troops subjected to it, had been of any magnitude. This was no doubt due to the excellent cover in which the individual soldiers had been stationed.

Neurological examinations were not performed on any of these prisoners.

INDOCTRINATION OF THE TROOPS

This group of parachutists had been well indoctrinated. They were singleminded in their approach to the war, and were convinced that, despite military reverses in Russia and the Mediterranean Theater (about which most of them seemed well informed), their command and the Führer would make the proper decisions at the proper moment and bring the war to a successful conclusion. They did not consider political subjects to be proper topics for speculation. They were strongly motivated by the concepts of duty and loyalty, and believed that they were fighting for the long-term interests of their families and their country. Typical statements by these soldiers follow: "I don't know anything about political matters. I fight because it is my duty. I cannot break my oath." (Prisoner No. 8.) "I fight because I must. . . . It is my duty. . . . I fight to have a normal life afterwards." (Prisoner No. 11.)

HOSPITAL RECORDS

The admission and discharge sheets of the main prisoner of war hospital serving Fifth Army were examined to rule out the possibility that erroneous impressions were being drawn from a study which devoted itself exclusively to ambulatory prisoners of war. No prisoners with diagnosis of concussion or neurosis were admitted or discharged during the period of time covered by this study. The writer was not authorized to question any of the patients in this hospital.

DISCUSSION

On theoretical grounds, the incidence of typical war neurosis in prisoners of war should be low. All secondary gain related to relief from active combat has been eliminated, and no conflict exists between the instinct of self-preservation and the call to duty. The low incidence of neurosis in this group was probably also due to the high

morale and esprit de corps of the division involved, and the excellent motivation of its members. The absence of important concussive effects was probably attributable to the excellent cover under which this group was stationed.

SUMMARY

Examination of a group of German prisoners of war taken from Cassino after the unprecedentedly heavy bombing on May 15, 1944, showed no instance of concussion or neurosis caused by the bombing.

PSYCHODYNAMICS OF CONFINEMENT OF WARTIME MILITARY OFFENDERS¹

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The imprisonment of one's fellow man for actions which run contrary to the existing social order, has been common practice since the dawn of civilization. If the practice were thoroughly without merit it would not have stood the test of time. Nevertheless, we must constantly evaluate our methods and seek for possible improvements. Categorically, confinement is confinement and it makes little difference, in theory, whether it be a civilian situation or a military one. In practice, however, there are manifest differences between military offenders and civilian offenders, and, further, there are differences between military offenders in time of peace and in time of war, and in garrison life and in the combat situation. It will not be the purpose of this presentation to describe in detail the various facets of these differences, but rather to admit their existence. The entire subject of the psychodynamics of confinement cannot be covered here in all its aspects. The observations and opinions here expressed are based only upon experience with military offenders, largely from garrison duty, in time of war. They may be applicable to the total field of penology, but the author wishes to make no such claims.

The Army employs confinement as a weapon for maintaining discipline just as civilian prisons exist presumably for the purpose of maintaining a smoothly functioning society.

There are several well-known basic principles involved. The deprivation of a man's liberty interferes with one of his most primitive human impulses. The unwelcome aspects of even the thought of being locked up loom large in the mind of every man. Man thinks he is free and as a result fights

the thought of being caged. The thought of confinement is a constant threat which acts as an inhibiting or deterring force to prevent unacceptable behavior. Even if proper performance is not expressly rewarded, the feeling of freedom in the face of its possible loss is ample motivation for maintenance of one's obligations to duty in the large mass of military population. This is manifestly a negative cohesive force and should be augmented by positive motivations, but that it exists cannot be gainsaid. Threat of confinement becomes increasingly important as a disciplinary measure when morale is broken down for various reasons. As such, then, confinement acts as a whip when it becomes necessary for the leaders to set the limits and visibly carry through the punishments for overstepping these limits. When these boundaries are consistent, firm and reasonable, the use of confinement acts as a deterrent upon conscious misbehavior, and can be classified as a builder of morale.

To illustrate the concept of the establishment of authority as a means of affecting human behavior, the story of the control of opium smoking in China is of interest. A drug was used which was supposed to cure the habit. There were, of course, many failures. The therapeutic effectiveness of the drug was greatly enhanced when a decree was issued involving a death penalty for all those cases which were not cured by the medication.

Confinement of a gross offender in a military situation acts as a morale builder in another way. When there is a particularly troublesome soldier in an outfit, the contagion of unacceptable behavior begins to spread and the relationship of the officer to his men becomes endangered. It sometimes happens that meting out a sentence to the most constant offender will absorb enough of the commander's hostility to clear the air and relax the tensions in the organization. The punishment has a three-fold

¹ This paper was prepared under the Command of Col. A. M. Weyand, Infantry, the Commandant of the Northwestern Branch, United States Disciplinary Barracks, Fort Missoula, Montana. The opinions expressed are those of the author and do not necessarily reflect those of the War Department.

value. When the leader's own aggression has been gratified, he can, once more, be protective to his men. The soldiers have learned an object lesson in that unmilitary conduct is suitably punished. And, lastly, both the officer and the men feel relief in having rid themselves of a source of irritation and consequently a wholesome relationship is re-established.

There have been numerous instances where the secondary gains from unmilitary behavior have been such that the motivations for proper performance have been thoroughly lacking. A discharge without honor, the blue discharge, does not offer a serious threat to some people. They accept it readily. Such people are obviously poorly motivated, either through their own instabilities or through their lack of loyalty to their country. The fear of a period of lengthy confinement eliminates the factor of secondary gains to a greater or lesser extent, so that improper behavior does not pay adequate dividends. Confining the military maladjusted soldier has another salutary influence upon the main body of troops. It removes from circulation those individuals who are likely to undermine the morale of those who function normally.

At this point the author wishes to emphasize the need to put the military offender behind bars and fences. Were he returned to the civilian community and permitted to enjoy the benefits thereof, it is obvious that the good soldiers would be justifiably resentful and morale would be destroyed.

From the standpoint of the military prisoner, we must not look upon confinement purely as a punishment, though the original trial and sentence were geared primarily for that very purpose. We have fortunately passed beyond the point of considering prisons merely as places where society takes its pound of flesh. Uttering the cliché that the men are confined "as" punishment instead of "for" punishment bears with it the implication that other than confinement per se, no new punishment should be administered for the original offense. A good spanking is sometimes well applied therapy to the child, but it must be accompanied by all the other attributes of the parent-child relationship to be therapeutically

effective. This brings us to the question of confinement as a device for actually altering human behavior. It is this principle upon which the rehabilitation center is established. It is the aim of modern penology to make confinement an experience which will prove constructive to the individual.

In analyzing the therapeutic possibilities of lengthy confinement, one finds many points that are worthy of consideration. As a general rule, it is noted, military offenses are committed when there are many tensions with distinct disturbances in the total adjustment pattern. There is frequently detected a vicious cycle in which some dissatisfaction occurs; this is followed by an act of some sort; then this is followed by punishment of a minor nature, then by more resentment and repetition of the act. In such instances a period of lengthy confinement affords an opportunity for breaking up the vicious cycle by inserting a time element which will force the issue to a climax in a setting which brooks no compromise.

A poorly adjusted soldier who reacts to his disturbance by a conduct disorder, will sometimes derive benefit by being removed from the sources of his irritation. Certainly this factor is very patent in the question of removal from easy access to alcohol. However, it is likewise true that situations can sometimes be more clearly evaluated in absentia when an unfortunate marriage or parental disharmony is interfering with the military duties. Similarly, confinement will remove men from outfits in which they have built up antagonisms and give them a chance to anticipate making new relationships.

It is a well known concept that disturbances in human behavior represent reflections of older disturbances in the interpersonal relationships of childhood. In this respect the officer-soldier relationship is a duplication of the father-son relationship, and old conflicts are accordingly stirred up. When the soldier commits a military offense, he is unconsciously acting out on some unsolved emotional need. In many instances confinement serves to crystallize and even gratify these unmet needs. The confinement situation often acts as a realistic symbol of the power of authority. In this respect the magical omnipotence which the child in-

vests in his parental authority, becomes on the one hand more powerful and more magical, and on the other hand becomes a true force which is dealt with on a reality basis. Similarly this magical power may exert its influence from the protective instinct-gratifying point of view by accepting the disturbed individual as he is, with a confidence that he will be able to attain further emotional growth.

Within the confinement situation there are different individuals who represent various components of the parental figure. The supervisor of prisoners and the compound commanders may represent the authoritative component. The psychiatrist, chaplain or social workers may represent the protective side. Each of these individuals can satisfy some emotional need. It has been found more effective therapeutically to channelize the positive, protective elements into one individual. Confidences and human relationships on this plane are more effective when they are highly personalized. The hostilities on the other hand, are more effectively handled when they are diffused. It is for this reason that intramural disciplinary hearings should be before a board of officers rather than one man. This causes a dispersion of the aggression so that the need to retaliate becomes less violent.

A period of confinement gives a man an opportunity for taking inventory of his own thinking and actions, his motivations and their consequences. The prospects of a dishonorable discharge, and the loss of approbation of relatives, friends and employers may improve his motivation. The intrapsychic readjustments through introspection represent a coordination of all the forces which are operating in the mind of the prisoner in his struggles with his environment.

In the wartime military situation, the crisis of therapeutic improvement frequently comes, when the prisoner is suddenly confronted with the manner in which he has failed to discharge his personal responsibilities to his country. This is most manifest when he receives news that a younger brother was drafted, or that a brother or cousin was killed in action. The sense of responsibility grows out of the guilt for having given way to narcissistic demands without thought of

other interpersonal values. The intra-psychic readjustments are favorably effected when unconscious motivations are brought into consciousness. Prolonged individual psychotherapy would be ideal, but is not often feasible. However, use may be made of direct interpretations in a few interviews which can give the prisoner food for introspection for many months to come. Group psychotherapy can operate in the same direction. In group treatments the individual participants can obtain material for introspection out of the aëration of their own problems and listening to the problems of others. Other factors involve the transference and identification with the leader and the identification with the other inmates.

This question of identification is one of the strongest therapeutic factors for emotional growth. The offender generally suffers from the fact that he has not made any healthy identifications. In a confinement situation there is the opportunity of making identifications with the others who are similarly striving for improvement and with those in authority with whom he may have meaningful relationships.

An occasional prisoner makes an adjustment on a religious level. In such instances the omnipotence of God becomes the protective force and a new pattern of behavior results. Such an eventuality is particularly salutary in the case of alcoholics. It is a known fact that psychiatry often fails miserably in such cases. Even if it means substituting a religious neurosis for the former one, it can certainly be looked upon with greater favor from the social and military point of view.

Although the foregoing therapeutic influences are operative, there is no cause for undue optimism as to favorable results. On the other hand it is also necessary to consider the possible destructive effects of confinement. A few of these forces will be mentioned. The factor of timing is extremely important. When a man is kept in confinement after the peak of his improvement has been reached, much of the value of the experience will be lost. Although such a person may continue to be an ideal prisoner, he may never again be capable of normal social adjustment. It is because

of this factor of timing that prisons employ the medium of home parole. This procedure has been proved highly effective in modern penology.

Confinement sometimes increases hostility to authority, thereby accentuating the vicious cycle previously described. In such instances the offender merely accepts confinement as another proof that he is not loved or trusted, and that everyone is against him; he feels that he is on one side of the fence and the world is on the other side. He refers to everyone outside of himself as "them" or "they." This elusive "they" are those who would harm him. That this concept of "they" and "them" is but a transparent extension of paternal symbols, can be easily discerned by study of the personal histories of the men. It is a form of paranoia which is present in many of these unstable people in varying degrees.

When the confinement situation fails, not only has the man not made healthy identifications, but he sometimes makes very unwholesome ones. When the barrier between the insecure "I" and the elusive "they" is too great, as occurs in the chronic offender, he is drawn only to those whose unsocial tendencies are likewise strongly established. In this way the social misfits fortify each other's hostilities and fears of normal society.

If the confinement itself has not been adequately handled by the officers in charge, it can be a destructive experience. In some instances, fortunately very rare, therapeutic success could have been attained, but was not, because all the salutary influences are not coordinated; for example, when proper performance was not praised or rewarded, or where unjust punishment was meted out. Such a situation can turn the balance in the direction of destructiveness instead of emotional growth. Penology is a business in which the Army has heretofore not engaged on such a large scale. Most of the officers and overseers are soldiers and have not been especially trained for prison work. In actual practice the civilian penologist cannot carry over completely his methods of operation into the army situation. The problems in a wartime disciplinary installation are patently different. The average enlisted man or line officer must make many new adaptations

and learn the techniques of handling military offenders. Leadership of the normal soldier is a difficult task. Leadership of the unstable offender is a skilled profession.

Another factor which can operate in modifying the thinking of the prisoners in a negative direction is the intensification of their problems by separation from friends and relatives and by the increase of financial burdens to the family. It is true that worry about such matters sometimes helps the individual in his relationships as was pointed out previously; but in a certain number of insecure inadequate individuals it serves to overwhelm them still further. This has been particularly manifest when the hardships to families impinge strongly upon their consciences.

A very important destructive influence of lengthy confinement is based upon the failure to provide normal outlets for the sexual drives. Repressive forms of sexuality, active or passive homosexual relations, often preclude the prospects of normal sexual adjustment in the future. The most tragic situation of all is the traumatic effect of forceful submission to perverse practices by youthful offenders at the hands of ruthless, aggressive psychopaths. Even the aggressive individuals have some homosexual features. They show dependency reactions upon their mothers as do many overt homosexuals, and in confinement often give way to all sorts of sexual aberrations, usually with a humiliating or hostile feeling towards their sexual partners.

It was pointed out earlier that fear of confinement is a stabilizing influence upon most people. When some men find themselves confined, however, and have already lived through the experience, this fear no longer acts as a discipline. Individuals who have learned how "to do time" do not profit by the experience. Such persons have built up their ego defenses to such an extent that confinement does not make much difference in their makeup. If anything, the former behavior patterns become more firmly fixed.

Often the so-called severe psychopath seems to be entirely untouched by the experience of confinement. This type of individual is not fighting parental authority. To him it does not even exist. His person-

ality is one of a hedonistic instinct-gratifying nature without concern for the welfare of others. He is thoroughly individualistic and is comparatively unaffected by external situations. His personality was so altered during early years by restrictive forces that he no longer reacts to confinement. One is prone to say that he does not "profit by experience," nor "benefit by his mistakes."

On the other hand, perhaps no one is entirely unaffected by confinement, and one could say that the one major emotional reaction to confinement is one of depression. There is little happiness in the loss of freedom, the disgrace of a dishonorable discharge, and the guilt about letting down one's country in time of war. It is only the most calloused individual who is entirely unaffected.

Perhaps the type of individual who is least affected by confinement is the social or religious deviate who is punished for taking a definite stand along certain emotionally-bound lines. Confinement to him is a sort of martyrdom. It is an identification with historical or Biblical martyrs and as such is neither constructive nor especially destructive.

There are some well-integrated individuals who are not particularly hurt by the experience and probably not especially helped. Such people may be serving sentences for accidental or situational crimes. A feeling of relief from the guilt emanating from his actions may take place. After that it is merely a question of a mature adult making the best possible adaptation under the circumstances.

What the Army calls undesirable performance and what society calls unsocial behavior can be looked upon as a disturbance in human character. There is a growing trend to discard the term *psychopathic personality* in favor of the designation *character neurosis*. This term implies fixed behavioral abnormalities in contrast to the term *symptom neurosis*, which refers to the psychoneurotic group. Looked at from the point of view of human relations, the individual with a character neurosis is no problem to himself but is a problem to society, whereas, the individual with a symptom neurosis suffers acutely himself but does not directly

disturb society. The one may be considered aggressive action against people, while the other is a submissive suffering at the hands of the world. The Army recognizes the psychopath as one who is showing distorted actions, whereas the psychoneurotic is one who is suffering from distorted thinking. That the two phenomena are reciprocally related needs no corroboration.

From the foregoing it may be concluded that the major consideration in the psychodynamics of the confinement of military offenders is the determination whether movement in the intra-psychic reorganization is taking place. If it is, it must be determined in which direction—constructive or destructive—the organization is moving. Abandonment of diagnostic labels upon the so-called psychopathic group gives greater latitude in evaluating the men from a dynamic point of view.

With the knowledge that human personality may be looked upon as possessing a flexible quality, the therapeutic program must be geared along mobile lines. At present the therapeutic program in our disciplinary barracks leaves much to be desired. The Army, however, has been a leader before in new advances in penology. Methods introduced at Fort Leavenworth in the last war, for example, were copied by civilian institutions.

It is obvious that individual psychotherapy cannot begin to scratch the surface for meeting the many problems of a disciplinary barracks. The only workable solution is to deal with the inmate population as a whole and in its various component groups. The subject will be discussed from the following aspects: (a) discipline and training, (b) satisfying the instinctive needs, (c) the acceptance of responsibility.

Discipline must not be looked upon purely from the point of view of a smoothly running organization. Many well-disciplined institutions present no problems in management because of the intimidation of the inmates into obeying set rules. Yet this alone does not signify that the men are going to remain perpetually disciplined after leaving the confines of the place. It is necessary to set the limits, no matter how rigid, and to remain thoroughly consistent about these

limits. When the men are adequately informed as to their limits and are suitably punished for overstepping the mark, they can make their adjustments accordingly. Unbridled instinctual expressions may be satisfying to the individuals concerned, but they are unrealistic as far as the demands of society are concerned. In a military disciplinary barracks the discipline must be at least as exacting in all respects as in the Army in general. Even though a large percentage of men may be returned to civilian life, the aim of being a good soldier must be kept in the forefront as an ever present goal.

It is the hope of many disciplinarians that if a person lives in a disciplined situation long enough, he will develop a pattern of performance that will become a part of the character structure. It has been found that this mechanism only operates successfully in a group of over-protected, undisciplined individuals who have had an unreasonable gratification of their demands without understanding the limits of society. Such cases are quite rare. Most of the cases do not respond to discipline alone. They need understanding. This understanding, however, must be offered in the framework of a closely disciplined authority.

Training means learning. This implies that the individual must learn what constitutes normal behavior and it also implies that he must learn a skill. As to the latter, much emphasis has been given by workers in the prison field for teaching trades and for providing some basic education. This is important but it is not the whole program; individuals with many skills and good education can still be decidedly unstable socially. It is a hollow achievement to give a man a skill only. Unless he has developed desirable character changes, he will not use that skill as a useful citizen.

A self-imposed discipline based upon the unpleasantness of loss of freedom occurs to some extent in all individuals who are placed in confinement. But when a man states that he has "learned his lesson" or that from now on he is going to "fly right" merely because he hates confinement, this need not be looked upon as genuine therapeutic improvement from the psychiatric point of view. In many instances it merely represents the repression

of symptoms with the basic need still unsatisfied. Such individuals are likely to again commit offenses or else they may become submissive individuals with a variety of somatic symptoms to replace their outward aggressions.

Discipline alone is obviously not the answer. Most of the problem soldiers have been problems in civilian life. Their histories show a predominantly large number of broken homes and parental rejection. They have grown up in an atmosphere of insecurity. The social features lacking—affection, home attachments and protection—are difficult to supply, but encouragement of families to maintain their interest in the inmates may prove useful in establishing some anchorage and sense of belonging.

Individual psychotherapy can be a highly effective instrument in confinement. Men who would never consult a psychiatrist in the free world respond readily to the professional interest which may be shown them when they can no longer solve their conflicts in their own ways. These men are suspicious of people, but they do not voice their suspicions. Giving them an understanding of their suspiciousness and making some attempts to understand their reasons for being suspicious serves oftentimes to establish a workable transference. One of the most unstable criminal psychopaths ever confined at our station told the writer: "If you were my commanding officer I would never have messed up. You should be a major general." This, of course, was but a transparent way of indicating his need for identifying himself with a suitable paternal symbol. It is an obvious transference phenomenon.

The psychiatrist should at all times represent, as does the chaplain, the protective, gratifying force in the institution. He should not be looked upon by the inmates as one who pries into their lives or one who tries to extract information that will later be used against them. Unfortunately case histories do condemn the men. If, however, the inmates have gained some insight into themselves they do not resent having imparted the information. The more actual benefit the man receives from his interviews, the more he is willing to disclose about himself.

When historical data are coordinated to make meaningful interpretations the men realize that unburdening themselves will work to their advantage. Interpretations should only be on an ego level with a scrupulous avoidance of id material. If sensitive material is too loosely handled the defenses are brought into play and the opportunity for having established a workable relationship may be lost.

The positive transference manifestations are not necessarily limited to the psychiatrist. Overseer, compound commanders, and other officers can each be important to some of the inmates for having rendered a friendly service individually or to the group. Rewards are always more effective than promises.

Group psychotherapy, mentioned earlier as a constructive factor in confinement, has engaged the interest of psychiatrists recently. This method of treatment is comparatively new and there is no set agreement as to technique or as to its effectiveness. The whole subject was covered by the author in a previous publication(1).

As an outgrowth of the group sessions and from conferences with Col. Weyand and Lt. Col. Bruscas, commandant and executive officer of Fort Missoula, respectively, a program for the improvement of the method of restoration is being offered. This program will be discussed from the point of view of the third point above mentioned, namely, the acceptance of responsibility. For the men who have not been recommended for restoration this subject is left in abeyance. It is not to be ignored. The only points worth mentioning are those of suitable job assignments and placing the men on local parole. For the men who are going back to duty, however, the Army must be very deeply concerned; the question of the fighting effectiveness of the restored prisoner and the effect upon the morale of the other soldiers of his unit is involved.

At present the policy of restoration varies to some extent in the different disciplinary barracks and especially in the rehabilitation centers. The training program at Fort Missoula covers a 3-months period in the disciplinary company. Men are not assigned until they have been recommended by the psychiatrist, the psychiatry and sociology

Board and the commandant and approval has been obtained from the War Department. The men live in a closely disciplined situation but are accorded some privileges such as attending the movies and messing with the enlisted personnel. This latter has proved to be one of the most salutary influences in the readjustment of the inmates to true military life. There have been reported instances from other installations where the restored prisoners have taken out personal grievances against their former guards after their restoration. Such things do not happen here because the men are granted an opportunity for fraternization while they are still in the status of prisoners. This practice is recommended as standard procedure.

The opportunity for getting into trouble should not be denied the inmates who are about to be restored. If a prisoner is alcoholic or shows unstable traits in other ways it is better to find it out while he is still a prisoner than after he is restored to duty. The disciplinary barracks do not operate under the plan of restoration with the sentence remaining in suspension. If a man is restored to duty he is in all respects an honorable soldier. When a man in the disciplinary company reveals that he cannot be a good soldier he should be returned to the regular inmate population. He should, however, be given an opportunity for a hearing before a disciplinary board before such action takes place.

The training program must be flexible enough for adequate evaluations as to the readiness for restoration on a reality testing basis. Although 3 months in the disciplinary company is considered a suitable time for such assignment, the program need not be thus limited. Some men may be ready for restoration in that time; others may require 6 or 8 months. During this period there must be a gradual assumption or responsibility, progress being accompanied by relaxation of the restrictions. The program should be so geared that by the time the men are restored to duty they will have been living for some time the lives of normal soldiers, so completely identifying themselves with the other soldiers that the thought of being prisoners is far from their minds.

If such a program were in operation there

could be more liberal policy of selecting men for restoration. Each would be given the acid test of his readiness to restore. No change need be made in the method of selection but greater emphasis can be laid upon the stabilization of formerly unstable people so that the constructive factors of confinement can be adequately utilized by the Army. It should be a cardinal principle that when a man gets into the disciplinary company he will without question be restored to duty unless he displays a poor attitude to discipline or his acts are such as to discredit him. Following his course of training he should be given a furlough. This policy is practiced at this station as it is at other disciplinary barracks. It is highly desirable motivating force to proper behavior.

CONCLUSIONS

The psychodynamics of confinement of wartime military prisoners was discussed. The constructive and destructive factors affecting the men were mentioned. The abandonment of diagnostic labels has enabled the psychiatrists to look upon the military offenders from the point of view of dynamic formulations which are capable of change as the situation demands. Finally, some suggestions were offered for therapy and for preparing the prisoners for restoration to duty.

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NEUROSIS AND GROUP MOTIVATION

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The importance of neuropsychiatric casualties in the Army is something which goes far beyond the actual number of patients who are treated as neurotics, or who are lost to combat. The statistics we have measure only the men lost with this diagnosis; they do not take into account the intangibles, the inefficiencies, the demoralizations, the group confusions and panics, the disciplinary infractions, which are parallel problems.

For this reason, any discussion of military psychiatry must necessarily be part of a larger discussion of military efficiency. The psychiatrist must be aware that while he is the expert who is primarily interested in the development of clinical mental disease, he is also part of a much vaster program which is directed toward making the Army fight better.

It is not the psychiatrist's place to prescribe conditions of combat, or even training or personnel management; but he does have one skill which may be of considerable value to the Army in an analysis of military efficiency. It is possible by observation of the sick to deduce a good deal about the state of the healthy soldier. Moreover, a knowledge of the dynamics of the neurotic soldier does give the opportunity to draw conclusions concerning the effect of battle on all soldiers. It is dangerous, of course, to judge all soldiers by neurotic casualties; but properly done, the analysis may be highly valuable, since the important dynamic processes in all soldiers in combat are basically similar, though varying in degree and importance.

As we have gained more experience, we have become more and more convinced of a single, at first discouraging fact: that when a neurosis became well developed in combat, the soldier's future usefulness as a fighter was permanently limited. For this reason we have become more interested in the other side of the problem, that of prevention of the neurosis. Fundamentally, this is a larger field than treatment, and a more productive one, for neurosis can be prevented, just as it can be precipitated. Moreover, since a

study of the problem involves basic questions of military efficiency, it may be possible for psychiatry to contribute to this larger field.

In discussing prevention of neurosis, it is necessary to limit the field rather sharply defining exactly what can be accomplished. There is no doubt that the primary cause of neurosis in combat soldiers is actual exposure to battle itself, to the threats of death and mutilation, to danger and hardship. It may as well be accepted that these conditions are fixed, and that tactical situations will often demand heavy casualties.

A second factor in the development of neurosis is the previous personality of the soldier, the thoughts, emotions and behavior patterns developed throughout his life, which he brings into the Army with him. Screening at induction and at replacement training centers has done much to eliminate the severe neurotics, those men who are from the first completely unfit for combat. They cannot, and should not, do more than that. This leaves, therefore, a very large group of healthy individuals, and a smaller group who have well marked neurotic traits. These men are fit for duty, but a certain proportion of them will develop neurosis in combat under anxiety producing conditions. The healthy individuals will show more resistance to this development, but they are far from immune. Our experience has been, in the past years, that only a relatively small percentage of neurotics we see in combat units could have been rejected at induction, or for that matter, should have been. It is quite clear that the soldier's premilitary personality cannot be essentially altered by us. The Army has neither the time nor the personnel to engage in the prolonged and intensive psychiatric procedures which would be necessary for any such program. Moreover, the results would be very questionable.

What is left then, after eliminating the possibilities of altering combat itself, or the personalities of the men exposed to it? What remains in the whole complex of attitudes, beliefs, feelings and behavior patterns is known

as "morale." Morale is the individual's feeling toward his group, his degree of identification with it, and the group's feeling about itself. Its primary effect is to determine the military efficiency of that group—whether it is a squad or an army. That morale can be actively influenced by deliberate measures is beyond doubt. It is not fixed. It can be built up, and it can be destroyed.

The importance of group morale in the prevention of neuropsychiatric casualties is not easy to prove by statistics, because of the many variables, and the difficulty of measuring morale mathematically. That neuroses tend to occur more rapidly in demoralized units is a common observation. An example, one of many, is cited, of the sudden occurrence of a large number of acute neurotic reactions in a single company. These followed the self-wounding of the commander, during combat, resulting in demoralization of his unit.

The neuroses which develop in combat display certain dynamic phenomena which emphasize the paramount importance of the individual's relation to his group. It is in this respect, as well as in their repetitive and highly traumatic setting, that they differ most sharply from neuroses commonly seen in civilians (Weinstein and Drayer 1)). It is probable that most soldiers labor under an increased load of anxiety, even when not exposed to combat. This is borne out by clinical observation, as well as by Rorschach studies (Linn(2)).

In combat, the soldier is exposed to a series of powerful stimuli which produce anxiety, chiefly by threatening life. He suffers anxiety in some form most of the time. Generally, he is able to deal with this in an equate and economical way, permitting him to continue to function as an effective soldier. While disposing of this anxiety may result in some loss of energy, he is still assessed of enough to go on with his duties. When, however, his anxiety rises to intolerable levels, when so much of his energy is required to deal with it that he becomes ineffective, he has become clinically neurotic. The combat induced neurosis is, by this standard, an illness which results from anxiety, and which is measured in terms of loss of effectiveness due to that anxiety.

The rise of this anxiety to incapacitating levels is by no means inevitable, nor is it regular in its course. When anxiety mounts, the individual reacts in a predictable way. He experiences discomfort, which, if prolonged or intense, leads him to develop hostility toward the source of the anxiety which tortures him. If he reacts in a healthy fashion, his hostility is expressed toward the real author of his difficulty, the enemy. If possible, this takes the form of more intense efforts to destroy that enemy. When he is thus able to react to his anxiety and the hostility engendered by it, by effective aggressive action, he has employed a desirable means of disposing of his feelings. There is, therefore, no new reason for an increase in his anxiety. He has acted, meanwhile, as an effective soldier.

Whether he can function in this way depends upon what means are at his disposal to combat anxiety by proper and effective action, action which implies the ability to express aggression in a desirable fashion. It depends, too, upon those resources which make it possible to endure anxiety. Both the capacity to express oneself in effective action in modern warfare and to endure anxiety, involve identification with a group. The individual rifleman cannot, as an individual, act against the enemy artillery which precipitates his anxiety; nor would he endure it, were it not for his loyalty to and dependence upon his fellows. This capacity for adequate expression involves more; the ability to direct hostility in an active fashion, hostility which has as its immediate goal the destruction of the enemy.

These abilities, first to identify with a group, and second, to express hostile drives effectively, are interdependent. The individual who forms healthy attachments to his company, division and to his nation, directs his hostility toward those forces which threaten it. The individual who is able to direct all of his hostility outside the group, is facilitated thereby in his identification with it.

The neurotic, on the other hand, finds himself unable to identify with the group in a healthy fashion. His group as well as his individual attachments are marked by overdependence and overconformity, or on

the other hand, by rebelliousness. Most often, his identification is highly ambivalent, and subject to sudden changes from devotion to enmity, when he feels disappointed or temporarily isolated. His loyalties are too often highly personal. This relationship is dangerous by itself in any combat situation, complicated as it is by the involved nature of the neurotic attachment, laden with dependence, devotion, jealousy and guilt.

The group, and the authority which it possesses, are to the neurotic a source of strength and fear. It is something to depend on, a source of comfort when the situation produces anxiety, and even an outlet for sublimated drives arising from inner, personal conflicts. His guilt and hostility may be expressed by highly effective combat activity. But his ambivalent relationship with the very group of which he is a part, his hostility toward that authority which supports him, places him under a considerable handicap, which most often reduces his combat effectiveness well below average.

The process of development of incapacitating anxiety in combat is qualitatively the same in the previously neurotic and the healthy soldier. It is simply a more rapid and more malignant process in the neurotic individual; but it does occur in healthy average soldiers as well. It is precipitated when the soldier finds himself in a situation which remains intensely anxiety-producing, but which permits of no prospect of aggressive action; most often it marks a change in the soldier's relationship to his group. This alteration occurs when as the result of heavy casualties, he is led to feel that his group is no longer capable of protecting him, that it is weak, ineffective, badly led or inimical to his own welfare. Frequently, it follows a weakening of group ties by physical separation, generally by prolonged hospitalization for any cause. Instead of feeling himself part of a company, he has now become a lonely, frightened individual, forced to protect himself in other ways.

At the same time, his hostility is expressed neurotically—that is, not against the object really responsible, the enemy who may fire back, but against the forces who in his eyes were more immediately at fault for his present plight. These are his immediate super-

riors, higher commanders, the Army, the nation, even our Allies. This rise in hostility toward the group and its authority, toward the only forces upon which he can depend for security, involves without fail a further increase in anxiety. This pattern, a vicious circle of anxiety and hostility, fixes the neurosis and disables the soldier.

In the neurotic, the sense of separation from the group occurs much more rapidly because of the ambivalent and flimsy nature of the relationship. For similar reasons, because a pattern of diffuse and misdirected aggressive drives has already been set up, hostility serves, not to produce effective action, but rather to rebound upon authority, to produce more anxiety, and frequently to reopen old conflicts.

This disruption of group relationships marks every neurosis which arises in combat. It may be manifested by withdrawal from one's fellows, and irritability, by increased hostility toward authority, and most frequently by a type of thinking and feeling about one's group which is characterized by catastrophic or negating expressions, *e.g.* "The platoon was wiped out," "All my buddies are gone," "The outfit isn't what it used to be." All of this is accompanied by hostility, often toward the higher authorities who ordered the soldier into combat or who planned the battle, rarely toward the enemy. Sometimes hostility is directed toward the individual himself, as guilt; in this case his attitude toward the group is that he has betrayed them or that he is unfit to lead them. How the group relationship is disturbed, and how hostility expresses itself, whether toward authority, toward oneself or as diffuse rage, depends to a considerable extent upon the previous pattern of the personality. In any case, once this development has taken place, the soldier has become ineffective.

Since the development of neurosis is dependent upon loyalty to and identification with the group, and the proper expression and direction of hostility, these points are the key to its prevention. For that reason any program which is directed toward the prevention of neurosis should be judged by these standards: first, how much does it encourage group identification, and to what groups; second, to what extent does it direct the soldier's hostility into proper channels.

It is worth emphasizing that the attainment of these objectives accomplishes more than merely hindering the development of neurosis. All of our studies of AWOL have led to the observation that the average AWOL is not a neurotic, but he is a man who differs from the good soldier in one important respect. He is never completely identified with his group, nor does he form strong attachments within it. When he acts, he acts logically as an individual. He leaves combat because he is interested only in preserving his own life; group loyalties mean little to him, and group punishment short of death means equally little. Any program which will make these men more loyal to their group, more dependent upon it for emotional security, and more afraid of its bad opinion, may be expected to have a beneficial effect on the incidence of AWOL.

In the same fashion, it may be anticipated (and this is standard military doctrine) that a program which improves functioning as a member of a group, which fosters group loyalty and responsibility, makes a good man a better combat soldier. The soldier who feels that he is a part of an effective group, a group which is protecting him, and whose interests are identified with his own, is a far better fighter than a man who fights only for self-protection. Moreover, the soldier who expresses his hostility against the enemy habitually, and when he is anxious, rather than against his leaders, is a far better soldier for that fact.

It is evident that any far reaching program directed toward the prevention of psychiatric casualties must be closely related to the equally important problem of AWOL, and the even more important one of increasing combat efficiency. The usual criticisms of any such program are first, that it destroys individual initiative by making the soldier into a robot, unable to act effectively by himself; second that the arousing of hostility toward the enemy has undesirable effects on the soldier's character, and is fraught with danger to his future behavior as a civilian.

The inculcation of a healthy group spirit certainly does not destroy the soldier's ability to act adequately as an individual; it rather fosters it. Those people who are the best adjusted in their own individual and family ties make the most effective larger

group adjustments as well, and are the best soldiers in combat. It is safe to say that really good military discipline does not destroy initiative, but allows the individual soldier to direct it into channels which are beneficial for the group. Thus impelled, he uses the same initiative to devise a way to save a comrade, to destroy the enemy, to make himself useful to his group. It is pertinent to remark that good soldiers, in this sense, make good citizens.

The second criticism, that of the danger of arousing hostility toward the enemy, ignores an important principle. Grinker(3), for example, recommends that "propaganda for hatred of the enemy should not be employed, since such hatreds eventually become self-destructive." Any program of indoctrination does not create hostility; it merely provides for its direction into proper channels. Even Hitler did not primarily create hostility; he directed that considerable amount already present into channels useful for his purposes. Hostility exists in every individual who is anxious or threatened; it is especially prominent in soldiers with combat experience. It makes itself evident whenever they are frustrated or unhappy. It is created by war, and it is undesirable only as war is undesirable, and avoidable only as war is avoidable. Once it is present, it is necessary to direct it, to allow it to be expressed in such ways that it will do the enemy the maximum of harm, and thus, for the period of the war at least, be a useful force. Hostility should not be confused with rage, which is powerless and without purpose. Well directed hostility is capable of much constructive work, most of all in the soldier. Hostility which is ignored and allowed to become diffuse is highly destructive, not only to the individual but to his group.

The program for preventive psychiatry must therefore be based on these two goals: group loyalty, and proper expression of hostility. The first goal, that of identification with the group, is the one toward which most progress has been made so far, and is the one usually thought of as "morale." Since it is a fighting group we are discussing, the term morale becomes synonymous with the soldier's willingness to *fight* as a member of a group.

Many of the methods which are useful

to attain this purpose are well known and have been used by armies long before psychiatry was ever considered. The training of recruits, and even of older soldiers, has always had, at least since Roman times, pride in the unit as one of its chief goals. This was the purpose of having battle flags, standards, unit citations, and similar measures. Moreover, in his training, the new soldier is taught, often mechanically, that it is better to be coordinated with others, that there is a pride to be taken in the ability to operate in groups, that it is less fatiguing to march in formation. It is certainly possible that more could be done in this respect to *explain* to the soldier what value this has for him, because all too frequently such training is met with resentment.

The American soldier, under favorable circumstances, identifies very rapidly with his immediate group, the platoon or company. He makes friends within it, he suffers its hardships and benefits by its privileges. Practically every soldier develops an attachment to a buddy, a relationship which sustains him in danger, and which gives him his first lessons in group activity and individual sacrifice. Buddies are often killed, however, and more often wounded or removed from the scene in other ways. In this case, the soldier who has no broader ties finds himself lacking any support, and is very likely to develop great anxiety. The average soldier can, however, identify sufficiently with his company to carry on.

To a less degree, the same is true of those men who have developed a firm attachment only to their companies. So long as the company remains a unit, they have something to sustain them; when it is decimated in combat, or when they are separated from it by wounds or illness, this attachment too loses its value.

Because of this, there has been a very definite attempt to inculcate a wider range of identification, to include the regiment, division and army, units which are relatively indestructible. This has value in proportion to the size and permanence of the unit; and it has been successfully fostered by such methods as distinctive insignia, newspapers and rest camps.

Underneath all this is the need to have the soldiers regard this group, whatever its

size, as powerful and good. He must look upon his company, or his army, as a group which is powerful enough to accomplish its mission, to protect him, and to appreciate him. He must feel that the mission of the group is *his* mission, and that it can and will be carried out.

Probably the most elementary requirement in all of this is leadership—leadership particularly at the level where the soldier can see it and feel it. The platoon, company and battalion commanders do not merely represent the leadership of the unit. They represent, rather, the soldier's idea of authority and leadership in the Army as a whole. The company commander is sometimes described in manuals as the soldier's "father." This is a sound analogy, because he is, to the soldier, the most immediate person of great authority. For this reason, there have been many examples in combat of high neurosis rates occurring in single companies which had conspicuously poor leadership; and similarly, low rates in others which had unusually good commanders.

The fact that this is not purely a *personal* attachment (except in the case of previously neurotic soldiers) is indicated by the finding that when a good company commander is killed, his company continues to function *better* under a new commander than a unit which had been badly led before. Good junior officers, therefore, have an influence which goes far beyond their personal relationships.

The company officer's ability to prevent neurosis depends upon the same qualities which make him an effective combat leader, not upon any special psychological training. Neurosis cannot be prevented by talking soldiers out of it; it can only be prevented by leadership which makes it unnecessary for it to develop. There are innumerable ways in which this operates—from the first principles of good discipline (which makes the soldier believe his group is fair and just), to the demonstrated ability to function well in combat (which makes him feel it is powerful). He has many other functions as well, which will become evident as other aspects of the subject are discussed. In any case, the company officer is the key to morale in the U. S. Army. The importance of his attitudes, his behavior and beliefs, is obvious.

This does not imply, however, that other

and wider factors are not of great importance in this respect. The functions of higher echelons are obvious in the attempt to produce wider identifications. A regimental privilege, or an army rest camp, have definite functions in reminding the soldier that he is part of something bigger, that this larger unit is powerful, and that it is looking out for him. There is no doubt that this program has had considerable success, and that it is equally sensitive to leadership in the various echelons.

There is, however, much more to be done. The soldier who fights only because his company or division fights, with no further ideas about it, may react with anxiety and resentment when those units suffer inevitable casualties, and when he himself is exposed to anxiety producing situations. It is necessary on all counts to encourage not only immediate identification with company, regiment, division and field army, but with the Army, and with the American war effort as a whole. The soldier who is able to make this wider identification has further protection from anxiety because he feels himself to be a member of the most powerful group in the world, a group which supports him, and for which he fights, and a group whose larger interests are his own. In addition, when he does develop hostility, instead of directing it at American (or Allied) groups, such as civilians, the draft board or other groups, he will direct it where it belongs—at the common enemy. There is little doubt that this can increase his effectiveness as a soldier; and it is our firm belief that it can have only a good effect on the incidence of neurosis.

That this is a tremendous job is undeniable; that it cannot be completely accomplished in the time and with the facilities available, is also true. But it has been begun, and everything which is done in this direction is highly valuable. It should be emphasized that we are not trying to make bad citizens into good ones; it is merely a matter of improving the group feeling already possessed by the average American.

It is possible to foster this widest and most important of group relationships by an instrument which is already available—information. The desirability of Allied victory, and its necessity, from the point of

view of the citizen-soldier are sufficiently clear. It is unnecessary to employ propaganda, in the usual sense of the word. The lines are clearly drawn between the world of the United Nations, and world of the Axis. The average American soldier, given the facts, is capable of understanding them.

The Army has already embarked upon a program which has as its objective the presentation of these facts in an interesting and clear fashion, through the agency of the information-education service. While it may be impossible to measure any distinct drop in the neurosis rate ascribable to this program, the results have become evident in other ways. It is certainly our impression that the average soldier is better informed now than he was two years or a year ago, that he feels more strongly the necessity for our victory, and that he has more understanding of his own place in the war. Even the neurotic is less likely to blame his commanders or our strategy for his discomforts. It is our experience, too, that all soldiers, healthy and neurotic, will accept such a program when it is skillfully presented. A "war picture" produces revulsion in soldiers, not because it is about the war, but rather because it is pointless or inaccurate. Even most neurotic patients willingly attend and become interested in the superior type of documentary film which has been made available, in spite of its obvious anxiety-producing qualities. It gives some comfort to know that one has suffered for the attainment of a worthwhile goal. But the important field of endeavor for all these measures must be the *healthy* soldier. He is still capable of normal and strong group loyalties, and of expressing his aggressive drives in such a way as to destroy the enemies of his group. The program is successful in the degree it fosters these patterns with respect to the Allied war effort.

This leads to certain conclusions concerning the value of various types of group appeals and emotional drives. Some are doomed to failure by their lack of inclusiveness, a defect which may lead to some group identification, but which allows the development of serious hostilities within the effective fighting group itself.

Efforts to direct hostility toward the Japanese on the basis of their race and color

may have some fleeting value, a value which is completely lost when the soldier finds himself a member of an extremely mixed group, fighting, perhaps, against Germans who look like the people of his home town. Only hostility which is directed toward the political and social aims of the enemy avoids this impasse; and only group identification which includes *all* groups of good will and similar war aims is likely to be really effective in the widest sense.

This discussion does not imply that other means of fostering group motivation are any less effective. The value of physical conditioning is well known, for itself; but it should also be thought of as a further means of elevating group identification. The same is true of combat training, which has tremendous value, not only in its fostering of individual confidence and efficiency, but also in its stress upon the functioning of the individual as an important and effective member of a group.

Popular presentations of the dynamics of fear are certainly valuable, particularly for commanders; but insight alone is very little protection for an anxious soldier who needs strength.

One final criticism of the program is based upon the observation that among the best informed and motivated individuals, one may discover an unduly high proportion of neurotics. This high proportion is rather a reflection of the fact that the average standard of information in the group is still far from high. The well-informed individuals are, therefore, deviants from the social norm. In many of them, an interest in world affairs is a response to chronic anxiety, rather than a manifestation of an active interest in the environment; in others, political interest results from chronic distrust and hostility toward any authority. When, however, this general standard of information is elevated, or the group tested is superior in intelligence, this observation is reversed.

It has been our experience, moreover, that the well motivated and well informed neurotic is far more effective in combat, and in the military service generally, and is more responsive to therapy, than the much larger number of neurotics who are indifferent to the war effort. In general a neurosis makes it

more difficult to develop effective group motivation.

There is little doubt that at any stage of group motivation, some soldiers will still develop neuroses in severe combat, just as some will desert. But it is possible to reduce their number significantly below the present one. The factors which influence group motivation are the most effective instruments for this purpose.

SUMMARY

It is impossible to make combat itself any less dangerous or pleasant. It is also impossible to improve to any great degree the inherent emotional stamina of our manpower. It is feasible and essential, to prepare men emotionally in such a way that their reaction to combat will be better. This emotional preparation is "morale."

Neurosis develops when anxiety reaches such a point that it requires most of the soldier's energy to fight it, and it interferes seriously with his ability to fight the enemy.

The development of neurosis in a given combat situation depends upon the extent to which the soldier has become part of his group, also the direction and effectiveness of the hostility which is aroused. Resentment and hostility are present in every soldier, particularly when he is under stress. If they are directed toward the enemy in the form of effective action, he can function as a good soldier, and is less likely to develop more anxiety. If they are misdirected, or cannot be expressed, excessive anxiety develops, and may be disabling.

Good morale protects the soldier from anxiety, first, by offering him the protection derived from group identification, and second, by directing hostility into proper channels. It does not produce hostility; it merely directs that which is already present.

The primary step in good morale is the establishment of superior leadership, particularly at the company level. Identification with larger military units, such as the regiment, division and field army, are desirable because of their greater permanence and power, protecting the soldier when smaller units are disintegrated in combat.

It is essential to inculcate loyalty toward

larger and more stable groups, toward the Army, the government, the nation and the Allied war effort. This program, based largely upon furnishing information to the soldier, when skillfully presented by able officers, has been accepted by the soldier, even by the neurotic soldier. It has been especially useful in directing the hostility already present into proper channels, away from command, authority and allied groups, and toward the enemy.

Psychoneurotic casualties will eventually occur in combat no matter how good the group morale may be. Nevertheless, high morale will delay their occurrence and lower their expected incidence.

Finally, it is our contention that a soldier who is well led, knows why he is fighting and believes in the necessity for fighting, will not only remain on the line longer and fight better, but will be less likely to be disabled by neurosis.

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THE TREATMENT OF HYSTERICAL DEAFNESS AT HOFF GENERAL HOSPITAL

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Hysteria plays an important rôle among those who complain of being hard of hearing. Just how much of the soldier's hearing loss can be attributed to actual physical loss, and how much to hysteria or malingering, is difficult to determine.

True hysterical deafness, however, can be determined with reasonable accuracy. The patient is given a careful examination by a qualified otologist. The air and bone conduction, the amount of vestibular response, the speech and the voice changes are all important phases of the diagnosis. The patient is given several audiometric examinations.

Marked variations of the audiometric tests, including fluctuations of hearing perception, are of extreme significance in diagnosing hysterical deafness. The patient is also examined by the psychiatrist to determine whether or not he has hysteria, or one of the other allied neuroses.

We have found the functional hearing loss among certain types of personalities. There is the hysterical soldier with the typical emotional background and symptomatology. There are patients with a traumatic or toxic history in whom the functional hearing loss remains after physical recovery. There is the type in which the hearing has ceased some time in the past because of deep-seated psychological conflicts or the deafness has been precipitated as a result of severe psychic trauma. There is also the so-called egocentric type who hears only what he wishes to hear. We all unconsciously exclude sounds which we do not want to hear. The egocentric type, however, carries this exclusion to an extreme.

The treatment of these patients is conducted by a psychologist under direct supervision of the chief of the psychiatric division of this hospital. In cases where the disability is totally functional, the patient is convinced in three or more interviews that he will be able to hear normally. He is introduced to

people that have recovered their hearing through narcosis. He receives their assurance as to the success of the treatment. Group suggestion is used, usually in the form of typical army informal discussion groups, wherein the patient about to be treated and those who have recovered are brought together in a group to talk over their difficulties. The patient is repeatedly reassured by the therapist that his case is typical of those already cured. He is told that he will merely go to sleep and wake up hearing normally. Every effort is made to prove to the patient that he has hearing and that the treatment will enable him to use it. Often the patient, after questioning, will remember instances when he has heard well. He will be shown that his hearing is due to some nervous trouble because it is obvious that he can hear better when he is not emotionally disturbed. Other such devices will be adapted by the therapist to fit the individual cases. When the patient is fully convinced that his hearing is about to be restored, he is ready for narcosis.

In all these cases sodium pentothal is given intravenously. The average case requires administration of the drug for about 25 minutes, preferably in the surgery division where oxygen is available. The patient is placed on the operating table. A Ravox or other hearing aid is placed upon his "bad ear." He is again reassured that upon awakening, his hearing will be restored and that any other conversion symptoms he may have are about to be eliminated. As the injection is made, the patient is instructed to count backward from 100 to 1. His conversation will usually become incoherent before he has counted 50. The pentothal should be administered slowly. The anesthetist should either gauge the speed of the injection so that the patient will receive three-fourths of a gram or less within 30 to 40 minutes, or inject it at such a speed that the patient will be in a so-called babbling

narcotic state for most of the desired time. When, with the use of the hearing aid, the patient will count and stop counting upon request, he is asked the following questions: What is your name? Your age? Your rank? Your serial number? Your home address? Your wife's name? He is assured and reassured that he is now about to recover his hearing. The hearing aid is removed and the external ear is sprayed with ethyl chloride, ether or some other harmless chemical that greatly changes the temperature of the skin. Then the therapist begins to ask questions without the use of the hearing aid. Sometimes a great amount of suggestion and persuasion is needed to secure answers. After each answer, the patient is assured that he hears well because he heard and answered the previous questions. The patient's eyes are closed. The hearing in one ear is blocked out and the therapist continues to ask the questions and backs away slowly to a far corner of the room. He then assures the patient that he hears well, the attendant tells him that the therapist was far away and that his hearing is now perfect. The procedure is then repeated with the good ear. Many times the patient will not hear at all when the hearing aid is removed. Continued rapid suggestion should be given until all effects of pentothal are gone. Many patients do not admit hearing until several hours after treatment.

Usually at the end of 2 hours, the effect of pentothal wears off and the patient is aware that he can hear well. Conversation must be smooth and persistent. Under narcosis the patient forgets in a few minutes a large part of the details of what he has said prior to the treatment. He also forgets that his hearing has returned. He must be informed again and again that he can hear. By this time the emotional blocks that lead to the symptoms of hysteria are being resolved, thus obviating the danger of the symptoms returning or becoming converted into other symptoms. We, however, must continually reassure the patient that he is stronger now and can handle every difficulty, that he can hear normally and that all head sounds will disappear in a day or two. This reassurance must be continued as long as the patient is under the effects of the narcosis.

Forty-five patients were treated by the method outlined.

REPORTS OF CASES

CASE I.—This 20-year-old male had an insecure home life and an unstable unhappy youth. In civilian life he had worked as a blaster; occasionally after blasting he would be unable to hear for a few hours. He developed the fear that he would lose his hearing entirely. Upon entering the Army he worked diligently and received the rating of a corporal. He developed however a marked aptitude as a blackmailer. A soldier under his jurisdiction returning late on a pass or caught with a pair of crooked dice was forced to "pay off." He would accompany other soldiers to a red light area and then threaten to tell their wives if he was not paid for his silence. These activities clashed with the dictates of his conscience and he began to show severe anxiety. In basic training he was recruited to run the infiltration course in which live ammunition and land mines were used. Shortly after running this course, he was shipped overseas. During the sea voyage his hearing began to decline. A few weeks after arriving in Europe, he was returned to America totally deaf and was sent to an army hearing center.

After adequate pre-suggestion, in which he was convinced that his hearing would be restored, he was given sodium pentothal. Shortly after the injection of the drug, the patient started babbling about the dangers of the infiltration course; he recounted his fears and exhibited a great deal of emotion. These statements were mingled with confessions of his blackmailing activities. He would call out to his former victims and in high emotion would argue with them. During this performance he gave no evidence of hearing any sounds. After returning to the ward, he continued talking, repeating over and over again his traumatizing experiences. Finally the therapist, recognizing that the patient was rapidly approaching the point of awakening, grasped his arm and shouted, "Planes! Planes! Hit the dirt!" The patient's eyes opened as he jumped off the bed and dived to the floor in a prone position. After a minute he arose and cried out, "Planes! Planes! I hear them." He rushed to the window and looked out at a squadron of marine torpedo bombers flying overhead. Immediately after that he could hear a few spoken words. With repeated psychotherapy his fears were alleviated and he was convinced that his sins were forgiven. He continued to improve rapidly and by the time that he was out of the narcosis, he had normal hearing and the severe anxiety had subsided. Before the treatment, he had 100% loss of hearing in both ears. He remained under close observation for 3 weeks, at the end of which he was quite well emotionally and his audiometric hearing loss was 19% right and 22% left.

CASE II.—This 26-year-old male technical sergeant was a hard working, conscientious farmer. In civilian life he was a valuable member of the community and an active participant in church work. Although worrying about his wife and baby, he resolutely did his duty in combat and as a leader of his men. His platoon followed him with great trust. He looked upon them as his boys and in any

man was killed or maimed, he took the matter to heart and built a strong resentment against the enemy. His religious conscience bothered him a great deal. Over and over again he was tormented with the faces of the enemy that he had killed, or the buddies of his that had been killed through some imagined neglect on his part. His emotional and nervous tension increased; and one day when he was in a foxhole with his buddy an artillery shell crashed down. His buddy was killed and the patient found himself with a complete loss of hearing. He was returned to the states and sent to an army hearing center. Here he showed symptoms of severe combat reaction, headaches, nervousness, tremulousness and anxiety.

He was given 0.625 gram of sodium pentothal intravenously. He was carefully examined prior to the injection and he admitted practically no hearing. Shortly after the injection was begun, he lost consciousness. A few minutes later he awakened and began muttering. He was told that the time had come for his hearing to be cured. Ethyl chloride was sprayed upon his ears. He was given continuous suggestion for 15 minutes and told that his hearing was cured and that from now on he could hear and hear well. He was asked many questions until, from across the room, he was able to hear a low spoken voice. He was returned to the ward and was kept in continual conversation for 2 hours, during which time he told of many things that were bothering him. He was assured and reassured that he was forgiven for all of the wrong that he had done, that the European war was over, that he could hear and that his men were safe now. After the effect of the drug had worn off, the patient not only heard normally, but he expressed great enthusiasm. The tenseness, anxiety and apprehension had entirely disappeared. Before treatment he had shown 52% loss on the right and 82% loss on the left. He remained with us for about 3 weeks after the treatment and on discharge he had no audiometric hearing loss and excellent emotional control.

CASE III.—This patient worked in a quarry before entering the Army. One of his tasks was to swing over great depths with dynamite in his pocket. This created violent fears which he attempted to conceal. When he would return home in the evenings, his parents would quarrel and he would have to intercede. These factors kept him in a continual state of emotional disturbance. One day when dynamite exploded accidentally, the patient was temporarily deafened. Later another such explosion killed a friend of his and his hearing became worse. He grew anxious, apprehensive and fearful. After joining the Army, his hearing continued to grow worse, and because of this difficulty he remained in this country. Upon arrival at the army hearing center, he was trained in lip reading and given an hearing aid. While there was definite evidence of a nerve type of hearing loss (loss of high tones and vestibular vertigo) it was decided to try narcosisynthesis. He showed 100% loss of hearing on the right and 90% loss on the left.

Pre-suggestion was not very successful. The

patient expressed the opinion that he was "deaf as hell" and nothing could be done about it. Under pentothal he gave no response until a hearing aid was placed upon his ears. He answered questions well with the hearing device. Gradually the power was decreased until he was hearing without the aid of amplification. His ears were sprayed with ethyl chloride and he was told that he was cured. Continued suggestion was used for about 15 minutes. Gradually the hearing aid was withdrawn until finally he could hear well without the aid. The patient was returned to his room and given psychotherapy for another 2 hours. Gradually the effect of the drug wore off and the patient was able to hear with fair acuity. Subsequent tests showed that there was normal hearing in the left and 16% loss of hearing on the right. The intense emotional disturbance had subsided. He was with us for another 2 weeks and at the time of discharge, he continued to show good hearing and excellent insight. This is an example of a functional overlay and a true nerve deafness.

CASE IV.—This 27-year-old soldier, a child of immigrants, was a meek, retiring individual naturally given to fears and introspection. Pressure of poverty, highly emotional parents, a dominating mother and fear of hostile neighborhood ruffians contributed to an unstable and insecure childhood. He suffered from discharging ears from the age of 3 years. Family conditions forced him to leave school when twelve years of age and seek employment. Although work was not always available, he married early and had two children. He shows an intense devotion to his family. Their hardships caused by his unemployment, resulted in increasing anxiety. Thus by maturity he had developed a definite hysterical personality with strong anxiety symptoms. He was drafted, sent overseas and ordered into combat. There immediately appeared a violent conflict. On the one side was his unstable anxious personality, weakened by fears for his family and fears arising from a feeling of physical inferiority. On the other side was a terrific animosity for the Germans because of their treatment of the Poles, including some of his own relatives, and the usual animosity of soldiers who see their buddies killed. In this case an exploding shell furnished a suitable precipitating factor, and immediately after, the patient developed hysterical deafness and a severe combat reaction. He was returned to a hearing center and after a routine examination, he was given sick leave. Upon returning home to his wife and babies he regressed to childhood levels of emotional control. He was too frightened to return and overstayed his leave. He cowered about the house until arrested by the authorities and returned to the hearing center. Our examination revealed that he was in no condition to stand trial. Therefore he was given psychotherapy for one week and then sodium pentothal narcosisynthesis. Then under narcosis it was revealed that he had killed several of the enemy. While this allowed a partial solution of the conflict, it created in him a great sense of guilt, which was relieved by recreating and re-evaluating his battle experience. Following

reaction from the narcosis, he showed normal hearing and a marked improvement in the combat reaction symptoms. Psychotherapy was continued and he received vocational counseling. He adjusted so well that he was able to withstand further extraneous difficulties. His hearing loss at the time of admission to the hospital was 54% on the right and 20% on the left. At the time of discharge, four weeks after the narcosynthesis, the audiometric hearing loss was 15% right and 0% left.

CASE V.—This 40-year-old soldier was born in the middle west and reared in a strict, religious family. He was given a high school education and one year of college. He then started to earn his livelihood as a writer. The patient was quite intellectual and had a strong social conscience. In his early years he had a strict moral code, which he gradually relaxed as he became more successful and associated with more worldly individuals. He lived with one girl out of wedlock for several years.

He was quite successful in his profession and at the time of his induction into the Army had an excellent income. However, the stress and strain of remaining on top had a telling effect. He became very tense, tremulous and high strung. He served in a non-combat organization for almost 3 years. He reacted very poorly to his environment, became more restless and finally there were the symptoms of deafness. When he was referred for treatment he had 35% loss of hearing on the right and 54% loss on the left. He was very tense and apprehensive. For several days he received psychotherapy. There was much pre-suggestion and explanation. His fears concerning the state of the world, the political situation, the morals of the people and dangers to the freedom of the press were alleviated. He was convinced that his hearing would be restored. Under sodium pentothal he revealed great antipathy to what he termed the inefficiency of organized society. He was under a great deal of tension when he discussed living with the woman out of wedlock. This apparently conflicted with his early sense of moral right. Upon recovering from the narcosis, he had normal hearing and made

a fair adjustment of his emotional difficulties. He remained with us for several weeks and on discharge there was no regression of the emotional picture. The audiometric hearing loss was 20% right and 10% left.

SUMMARY

This is a preliminary report of our clinical experiences and treatment of 45 patients afflicted with hysterical deafness.

These patients were given sodium pentothal narcosynthesis. Of this group 16 had been overseas in combat; 14 had been overseas, but not in combat; 15 had no overseas duty. Twenty-two gave a history of deafness prior to induction and one admitted hearing loss for 32 years prior to induction.

In the true hysterical patient the results were spectacular. When there was an element of conscious simulation, an improvement in the hearing loss was observed but normal audiometric readings could not be obtained.

Intensive therapeutic efforts were continued for several days after narcosynthesis, followed by daily consultations with the neuropsychiatrist over a period of 2 to 4 weeks. The condition of these patients having remained stationary, with no evidence of regression during this period of observation, separation from the service was carried out.

The period during which these cases have been observed is insufficient to warrant undue optimism. Failures are anticipated but it is believed that this preliminary study warrants further investigation.

"FURLOUGH" PSYCHOSIS¹

GEORGE F. SUTHERLAND, MAJOR, M. C., A. U. S., AND MILFORD E. BARNES,
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Furloughs and leaves are regarded as restorative periods of rest and recreation. That they may be as emotionally trying as hard campaigns is likely to escape attention. In the soldier one is accustomed to associate emotional up-sets with vicissitudes of military life(1, 2). In the reactions which we are about to describe, on the contrary, it is the sudden release from military authority which precipitates the psychosis. By "furlough" psychosis we refer to an episode of the acute schizophrenic type(3) attendant upon the sudden emotional readjustments which a furlough or leave entails.

In the course of the past year a significant proportion of the patients admitted as casals from furlough to the neuropsychiatric section of a large military hospital have fallen into this category. In the typical case the patient has returned from overseas on leave or furlough and for the first few days seemed well and happy. Soon, however, his relatives and friends began to notice that his personality and behavior were undergoing an alarming change. They remarked that whereas at first he seemed his usual self, he later became irritable, tense and behaved strangely. He appeared bewildered, indecisive and seclusive. He ate little, slept poorly and frequently wandered about the house during the night. In spite of their reluctance to terminate his visit at home prematurely, some incident occurred which led the family to fear for the patient's safety and prevailed upon him to report for medical advice.

On admission to the hospital the patient was confused and occasionally disturbed. Mood was apprehensive with some depression. Affect was inappropriate. Attention and concentration were maintained with difficulty. Speech was rambling, irrelevant and frequently incoherent. Delusional trends and ideas of reference were prominent. Hallucinations were present in some cases. Orien-

tation was sometimes accurate. Memory, recent and sometimes remote, was defective. Suicidal trends were frequently present. Intellectual assets were impaired. Insight was lacking and judgment correspondingly affected.

When first seen at the hospital the patient's condition was occasionally mistaken for alcoholism. The patient often seemed eager to excuse his behavior on this ground, insisting that he had been drinking excessively. The relatives were usually quite as emphatic in denying this statement. The subsequent course of the illness showed that alcohol played only an incidental rôle.

During the early part of his hospitalization the patient became progressively worse; the delusional trends became more pronounced, speech approached a state of near mutism, stereotypy was marked and refusal of food was common. The most outstanding symptom was a severe degree of confusion with blocking of thought processes. After approximately two months hospitalization, slow but gradual improvement ensued. The usual forms of therapy proved singularly ineffective in shortening the illness. However, shock therapy was not tried. Confusion was the most lingering of the symptoms. In no case was it possible to return the patient to duty.

Twelve cases came under our observation, of which 4 typical case histories are cited.

CASE I.—First Lieutenant, Army Air Force, 28 years of age. History reveals that the patient was a quiet, well liked person with feelings of inferiority. He was constantly exhorted by his dominating mother to enter the ministry. He enlisted in the Army in 1938 in order to avoid criticism because of his lack of enthusiasm for this vocation. He married in 1940 after being commissioned. This patient served 27 months overseas without apparent incident and was returned to the United States on rotation. While overseas he began to worry about his wife's pregnancy and her ability to care for the child after it was born. While home on leave he became "nervous," expressed fear that his young daughter was not normal, and was indecisive in his actions. He then began to drink excessively and to

¹ From the Neuropsychiatric Section, Crile General Hospital, Cleveland, Ohio.

wander about at all hours of the night. His behavior became so unpredictable that his wife feared that he would be unable to proceed to his next station unaccompanied. He was, therefore, induced to report to the hospital for advice. He came asking if he were fit to drive his car. His rambling irrelevant conversation and his obvious confusion led to immediate hospitalization. He was first admitted to an open ward but his increasing confusion necessitated his being transferred to a closed one. Mental examination revealed retardation and depression with inappropriate affect. Attention and concentration were greatly impaired. Orientation was accurate but his memory for recent events was poor. Vague delusional trends of self-accusatory character were present but no hallucinations were elicited. Insight and judgment were greatly impaired. At first his appetite was fair but later he became suspicious and declined to eat without urging for a short period. Insulin sub-shock treatment was tried without benefit. After 2 months hospitalization spontaneous improvement ensued. At the height of his illness an interview conducted under amyltal revealed marked guilt feelings with sexual preoccupation. A formal diagnosis of schizophrenia, type unqualified, was made and he was retired from the Army. At the time of his discharge from the military hospital he had improved but was still confused, incoherent and apathetic.

CASE II.—Private, Infantry, 20 years of age, an only son. His father was dead. The patient was sensitive and shy, well liked by men but had few social contacts with the opposite sex. Patient was overseas for 7 months and returned to the United States in June 1944. Shortly after his arrival home on furlough he became excited when another soldier ridiculed him at a dance and was advised by civilian police to go home. Upon his arrival home his mother became alarmed at his threatening attitude and called the police department. During the excitement he left the house and was apprehended while creating a disturbance in the public square. He was admitted forthwith to a military hospital. On admission he was disturbed and aggressive. He was hallucinated and delusional, declared female vitches and movie stars told him to have a good time; he controlled the moon and the stars and said that all larvae must be destroyed. For a period of 2 weeks little change in his condition was observed but subsequently gradual improvement ensued. At the end of 2½ months he was transferred to a Veteran's hospital with a diagnosis of dementia ræcox, catatonic type. At that time his sensorium was clear but his behavior unpredictable and his mood one of apathy.

CASE III.—First Lieutenant, Army Air Force, 5 years of age. In civilian life was well liked and jovial sort. He worked for his brother as a shoemaker and had never been away from home for any length of time. Two months before going overseas he married a girl he had known only one week. After serving 19 months overseas he was returned on rotation. During the time he was away his father

died and his brother was killed in another theater of operations. While overseas he complained of headache and was hospitalized for a short period and then returned to duty. He began to worry about home after he received a letter stating his wife was "running around" with other men. Soon after his arrival home friction developed not only between himself and his wife but also with his own family and his in-laws. He felt that others were making fun of him presumably because he had returned from overseas while the war was still in progress. He became increasingly seclusive, irritable, ate very little, suffered from nightmares and complained that the house was too noisy. His relatives persuaded him to report to the hospital because of his unusual behavior and because of the tension he was creating in the household. He entered the hospital complaining that he was making his mother nervous. On admission he was depressed to the point of apathy. He showed little interest in his surroundings; he was correctly oriented; he answered all questions with "I don't know"; and he would supply no information spontaneously. He was confused in his thinking, unable to recall significant dates and his thought processes showed marked retardation. No delusions or hallucinations were elicited. Insight was completely lacking. During the early part of his stay at the hospital his condition became progressively worse. He was extremely seclusive, inactive and spent most of the day lying in bed staring into space. For a time he was almost mute. He complained that others were talking about him and making fun of him. For this reason he refused to go to the mess hall. After 2 months of hospitalization, slow but gradual improvement took place. A diagnosis of severe reactive depression was made. He was retired from active service. At the time of his discharge he was still apathetic and bewildered.

CASE IV.—Private, Chemical Warfare Service, 26 years of age. History reveals a very strong mother attachment. He showed little interest in the opposite sex. Patient remained at home until induction into the Army and was employed in a steel mill as a common laborer. He had few social outlets and spent most of his time with his family. After serving overseas for 18 months, he was returned to the United States on rotation. While at home on furlough, the family noticed that he was moody, lachrymose, irritable, self-critical and at times confused. His sleep became disturbed and for the 3 days prior to his hospitalization he slept very little. Finally when he announced his intention of committing suicide by jumping off a bridge, he was brought to the hospital by his relatives. On admission he was violently disturbed, confused and incoherent in his speech. Mood was depressed and affect inappropriate. Attention and concentration were poor. Memory showed relatively no impairment. He expressed guilt feelings over having been returned from overseas. He stated that he had seen the devil who told him to commit suicide. He had no insight into his condition. After 4 weeks hospitalization he began to improve spontaneously,

but he remained depressed, affectively flat, and vague in speech. A diagnosis of psychosis, undiagnosed, was made and he was discharged from the Army as being unfit for further military service.

The symptom complex seen in these patients was not sufficiently clear cut to include them in a single diagnostic category. The psycho-dynamic mechanisms, however, show a constant basic pattern. These individuals were reared in a home atmosphere where maternalistic dependency was fostered (2, 4). None of them had succeeded in establishing himself vocationally or otherwise as an independent individual. None of them objected to entering the military service; in fact it provided a happy solution for the immediate future. Each got along well in the Army, their military records showing they made good soldiers both in this country and overseas. All showed the mood-swings to which the average soldier is subject under stress but did not show any undue emotional instability. Each felt that he had earned his furlough or leave and eagerly looked forward to returning home. It was only after they returned home that they began to develop clinical symptoms. At first these were vague feelings that home was not as it should be, and that they were not enjoying their homecoming as they had anticipated. They were conscious of a lack of rapport with their environment. This rapidly increased to a point of active criticism and open antagonism toward the home, relatives and friends. Home seemed too small, too noisy or too quiet, and too confused. They complained that they did not experience the degree of freedom they had expected because of the social demands made on them by friends and relatives. Many resorted to alcohol as the solution to their difficulties. The minor decisions which they were called upon to make became bewildering and irritating. They resented the attitude of civilians, who they felt were betraying the soldier overseas, and began misinterpreting casual conversation as adverse criticism. Not infrequently the actual spark which set off the emotional explosion was a chance remark which the patient felt implied cowardice on his part. It was at this point that his symptoms became so obvious that hospitalization was necessary.

It is commonplace for soldiers who have

been overseas on returning home to experience at first a sense of insecurity, of strangeness, and of being out of place at home(5). They are apt to be intolerant of civilian life. They are surprised to find that parents and children have grown older; their former social world has been disrupted; and in general homecoming is not as they had pictured it. The realization that they will be unable to accomplish all that they had hoped to do in the limited time allotted them often leads to a panicky feeling and a sense of frustration. Unlike the average soldier, our patients were unable to cope with the situation and actual panic did supervene. We feel the explanation for this behavior lies in the unusual dependency of our patients on military authority and their inability to adjust to its sudden withdrawal(6).

It has already been pointed out that these individuals prior to induction into the military service, had not achieved the financial, vocational or emotional independence characteristic of maturity. For these individuals entry into the Army obviated the necessity of a personal struggle for independence. The Army provided them with a ready made sense of security, importance and emotional maturity reflected from the military might of which they had become a part. They had more social freedom and they were relieved of the immediate necessity of planning for the future. The transition from civilian to military life was accomplished with relative ease for psychologically they merely exchanged the maternalistic domination in the home for the paternalistic protection of the Army. For them the latter was more advantageous because its impersonal quality allowed them more apparent personal importance. The complete severance of the home ties occasioned by foreign service led them to depend more and more on the Army for security and direction. So long as this relationship was maintained they were able to function without emotional conflict.

The return home effected a temporary abrogation of this relationship for which they were ill prepared in view of the readjustments they were called upon to make. In the first place, they were obliged to re-orient

themselves to the home which had undergone a number of changes in their absence. Their families had learned to function without them and their presence was no longer an integral part of the family milieu. The process of re-establishing themselves in the family entailed the necessity of making decisions for which they were obliged to assume full responsibility. In the second place they were called upon to assume this responsibility without support of the military authority on which they had come to rely for approval and guidance. Thus homecoming presented a double threat. Furlough or leave presented these soldiers with a situation in which they were suddenly deprived of military authority, apparently rejected by their families and consequently thrown upon their own slender resources.

The sudden withdrawal of military support was undoubtedly the incident which precipitated the emotional disturbance. Had the change been more gradual, one may conjecture that its effect would have been less cataclysmic. Thus far there has been little opportunity for observing the dangerous effects of the sudden withdrawal of military guidance on dependent individuals since few soldiers have been returned from overseas other than through medical channels. With the cessation of hostilities in Europe and the consequent return of large numbers of soldiers, these cases should be encountered more frequently.

SUMMARY

Twelve cases were observed showing an acute schizophrenic reaction, seemingly precipitated by the sudden emotional readjustments necessitated by leave or furlough.

The onset of the symptoms occurred abruptly a few days after these apparently well adjusted individuals had returned home. The clinical symptoms, however, were not sufficiently clear-cut to include them in a single diagnostic category.

The 4 typical case histories cited indicate that the episode was provoked by the sudden release from military authority upon which the individual had become emotionally dependent.

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PERSONALITY STUDIES OF MARIHUANA ADDICTS

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Studies of addiction to marihuana seem, in the main, to have ignored the personality pattern of the user; emphasis has been largely on medical, pharmacological and sociological aspects. The personality studies which have been made are either anecdotal or of subjective experiences. The literature of marihuana addiction contains little of the type of research that has been done, for example, on the alcoholic personality.

We have had the opportunity to make intensive case studies during the past seven months of 60 marihuana addicts hospitalized in the neuropsychiatric service, Regional Hospital, Fort McClellan, Alabama. Detailed life histories were obtained which brought out environmental backgrounds, family histories, behavior patterns, drives, attitudes and interests. Through the helpful cooperation of Major Lawrence Radice, M.C., psychiatrist in charge of the consultation service of the Infantry Replacement Training Center at Fort McClellan, additional data were obtained which made possible statistical validation of the personality studies. The study of Marcovitz and Myers, "The Marihuana Addict in the Army," which was published while our study was in progress, was also a great help.¹ Their conclusions as to the socio-economic factors, personality picture and the difficulties of the addict in the military situation were very positively supported by our findings. Their study and ours show a definite motivation towards use of marihuana clearly revealed as part of the personality pattern of the user.

TYPE OF SUBJECT STUDIED

Marcovitz and Myers studied 34 Negro and one white addict who had difficulties which brought them to the attention of military or medical authority. At Fort McClellan, with a ratio of seven white infantry training regiments to one Negro infantry

regiment, the addicts referred to Major Radice or the neuropsychiatric service numbered 55 Negroes and only 5 white soldiers.

The preponderance of Negroes is due, we believe, to the peculiar need marihuana serves for them. The Negro psychopath or neurotic faces not only inner anxiety resulting from childhood family relationships, but also suffers from a feeling of resentment towards the submission which is required by the white stereotypes of Negro behavior. Marihuana, insofar as it removes both anxiety and submission and therefore permits a feeling of adequacy, enables the Negro addict to feel a sense of mastery denied him by his color. The white psychopath or neurotic not faced with a dual problem of personality and environmental frustration finds alcohol or other forms of satisfaction more acceptable.

REASONS FOR ADMISSION

Of the 60 addicts studied, only 9 were referred for psychiatric study because of non-psychopathic behavior. Twenty were awaiting court martial for such offenses as insubordination, frequent AWOLs, causing trouble; 5 were referred as part of IRTC policy of study of AWOLs; 16 were referred by company commanders who found them behavior problems or poor soldiers but had not preferred any charges; and 10 had been referred primarily as drug addicts. A total of 85% can be classified as being undesirable army material because of attitudes and behavior, and the remaining 15% as potentially unfit because of neurosis or poor morale. Sullenness, resentment of authority, lack of motivation to army service were typical of nearly all. The common story of these men was that the Army failed to understand them, and there was a childish, sullen resentment to regulations and discipline.

AGE AND ARMY SERVICE

The age of the addicts was usually in the early twenties. This, of course, was because

¹ Marcovitz, E., and Myers, H. J. The marihuana addict in the Army. *War Med.*, 6: p. 389, Dec. 1944.

they are infantry soldiers, since this branch of the service consists largely of young men.

The average length of service was almost 6 months, but 21 or 35% had less than 4 months of service when referred to the psychiatrist. Lest it be thought that these men had received 6 months training, we should explain that in many instances AWOL or need for medical treatment prevented training. In terms of proper army attitude, behavior, and actual time spent in training we found only 2 had acceptable records. Based on Marcovitz' and Myer's study, as well as our own, we can safely hypothecate that the Negro marihuana addict makes a very poor soldier.

FAMILY BACKGROUND

POSITION IN THE FAMILY

One of the startling similarities revealed was the position of these addicts in their family group. Twenty-one or 35% were the only child in the family. This was because nearly all came from broken homes. Only 9 or 15% came from what is considered desirable home environment. The other 85% had the roots of their personality in bad or broken childhood home situations.² Further analysis of their position in the family showed 28% either the oldest or youngest in families consisting of more than two children. Most common factor to all these addicts was that of a broken home, 63% having lost one or both parents. In terms of position in the family the only child or the youngest or oldest in the large family stood out. Of the 38 cases of broken homes, 12 were due to death of a parent, 16 to desertion of a father, 2 to divorce, and 8 to separation of parents.

² Marcovitz and Myers found similar results. They list the following factors:

KNOWN FAMILY BACKGROUND IN 20 CASES

Background *	No. cases
Early death of parent.....	11
Separation or divorce.....	7
Neurotic parent	7
Delinquent parent or sibling.....	4
Step parent	2
Insanity	2

* In several cases 2 or more of the factors were combined.

ECONOMIC BACKGROUND

From an economic standpoint 16 individuals came from homes where there were above average living standards with some luxuries, and 34 were from marginal levels of frequent or infrequent poverty. No conclusions could be made for 10 of the addicts. Economic backgrounds were sharply divided into these two categories.

PARENTS

Personality of the parents as remembered by the patients showed definite similarities. Sixty-eight percent of the men furnished a picture of a father with very undesirable traits; they were described as drunkards, heavily promiscuous and very definitely undesirable by the addict's own standards. However, 60% of the mothers were reported as being very strict with definite ideals of morality and behavior, and as making stern efforts to inculcate high moral standards, sometimes using physical punishment when these standards were not met. Another 35% describe their mothers as being of good moral character, attempting to train sons properly, but not resorting to physical punishment or threats. It can be safely assumed that nearly all of those who had known the influence of a mother had childhood training which should have made them good citizens. Most of the men spoke with respect of their mothers, showed no signs of bitterness or resentment. Those with living mothers stated they still obeyed them, feared their disapproval, and definitely tried to conceal psychopathic behavior from them.

The conclusion may be drawn that these addicts had a father either lacking or of such poor character that he was not a desirable pattern for them to follow; and that parental strife, resulting from the opposing characteristics of father and mother, laid the foundation for inner conflict in their sons.

EARLY CHILDHOOD

Emotional instability in childhood was found to be common among all. Fifty-one admitted nightmares which, in many instances, persisted into adult life. Nail-biting, enuresis, sleepwalking and sleeptalking were also typically present. Bedwetting to late

adolescence was common. Attacks of dizziness and fainting spells were admitted by a large percentage. We were able to obtain details of common nightmares from 8 of the men and strong indication of super-ego punishment and latent homosexuality were quite evident.

Mental defectives are in general rejected by the Army, so none of the men could be considered as subnormal. In terms of the Negro population in this country these men were within the range of normal intelligence. Army tests showed this to be true although records of school showed only 11 had better than junior high school education, and 25 had less than grade school education. The point is that none of these marihuana addicts can be considered as borderline in intelligence, or even as dull. They were equipped to adjust mentally to their environment although they failed to take advantage of opportunities for an education.

SCHOOL BEHAVIOR

Forty-six men admitted delinquent behavior during their school years. In general they were candidates for reform school; habitual truancy, arguing or fighting with teachers, gambling, sexual activity, associating with undesirable companions, petty thievery, lack of interest in school were common. A number were forced to leave school or to transfer before the legal age. In general they left school very gladly when of age.

The period shortly after pubescence was when these patients showed their first symptoms of psychopathy and resentment to authority. Despite maternal influence they soon associated with other students of undesirable character. Many contracted the marihuana habit from school companions, and sex activity was begun in early adolescence.

WORK

Fifty-one admitted a poor work history. There were frequent changes of jobs, drifting from city to city, arguments with employers. The men commonly worked as laborers on jobs which permitted little personal expression. Those who had not yet contracted the marihuana habit soon did from fellow employees. They chose to associate with

coworkers of the same nature as themselves, or quickly found associates outside of work who were fellow psychopaths.

Both Marcovitz and Myers,³ and the Mayor's Committee on Marihuana,⁴ found that marihuana addicts had poor work records, with unemployment or part-time work common, and little desire for work.

The men in our study readily admitted mild use of marihuana during working hours or coming to work already drugged. By means of the drug they were able to endure the monotony of their tasks. Off work hours were spent sleeping, smoking marihuana and associating with other addicts in search of pleasure.

CRIMINAL ACTIVITY

Only 10 in our study had never run afoul of the law. The others were arrested for crimes ranging from murder to drunkenness. No attempt was made to classify the arrests by type of crime; but drunkenness, disorderly conduct, fighting and petty thievery were most common. Few could be called professional criminals; they were nuisances from the police viewpoint.

The contention that marihuana causes crime has been made.⁵ In refutation the Mayor's Committee on Marihuana claims that although the marihuana smoker is guilty of petty crimes, the criminal career existed prior to the time the individual smoked his first cigarette. They quote Bromberg as follows:

As measured by (court records in New York County) . . . it can be said that drugs generally do not initiate criminal careers. The expectancy of major crimes following the use of cannabis in New York County is small . . .⁶

The history of the 60 addicts studied in this article shows an established pattern of delinquent psychopathic behavior from the standpoint of family anxiety patterns, school behavior and work history. Infractions of the law are to be expected, regardless of the use of marihuana. The underlying personal-

³ Ibid., p. 385.

⁴ New York (City). Mayor's committee on marihuana. The marihuana problem in the city of New York. Lancaster, J. Cattell Press, 1944, p. 12.

⁵ Walton, R. P. Marihuana: America's new drug problem. Philadelphia, Lippincott, 1938, p. 31.

⁶ Mayor's Committee, op. cit., pp 14-17.

ity is primarily the determining factor in criminal behavior.

We can summarize by stating that these men had traits of character which lead to conflict with the law. Basically the urge for criminal activity must be present. Use of marihuana lessens or eliminates anxieties which interfere with the urge for lawlessness.

SEXUALITY

A popular concept is that marihuana smoking causes definite desire for sexual excesses. Analysis of the sexual behavior of the subjects of this study was very interesting. Only 8 subjects had what could be called a normal heterosexual pattern (not necessarily a moral one) in that sex activity was not the predominant drive in life. Seventeen or 30% admitted excessive sex activity but on a heterosexual level while an additional 30% admitted sex gratification with both men and women. Ten or 18% were definitely homosexual, nearly all playing the passive rôle. Surprisingly, 3 addicts admitted sex satisfaction only by masturbation while 1 claimed to be impotent.

Whether through psychic or genital irritation, marihuana was associated as a factor in sex drives by our subjects. Many of those with heterosexual desires claimed a lack of interest in women unless under the influence of the drug. Further questioning revealed that it was not necessarily a lack of libido which caused such restraint, but rather a lack of confidence in ability to seduce the opposite sex acting as a factor to inhibit sexual desires. Marihuana gives increased confidence, making women powerless to resist their blandishments and masculine charms; they also had more confidence in their sexual strength when "high."

For most of the 60, sexual satisfaction without any desire for emotional ties was characteristic. Emotionally, their sex life can be said to have existed on a masturbatory level, as far as love for the opposite sex was concerned. Many of our subjects from large cities admitted weekly participation at gatherings or "tea parties" where marihuana is smoked. As part of the entertainment "circuses," presentations of perverted sexual actives, were staged. Their statements

were in direct contradiction to the situations found by the Mayor's Committee on Marihuana: investigators claimed marihuana parties were in no way used as preludes to sex immoralities but existed primarily for the sole enjoyment of the drug.⁷ According to our subjects "everything went at a tea party." There was no sense of shame among the participants and guests, but an eager desire to regress to a childish level of sensuality, to defy and flout accepted standards of morality. We were told of the eating of feces, of the swallowing of leukorrheal discharges, of other activities in which individuals vied with each other to see who could commit the most disgusting acts. All sorts of perversions, both homosexual and heterosexual, were staged. "Nothing seems wrong any more," one of the patients commented. "You see lots of queer things going on that you never dreamed existed." Marcovitz and Myers in "The Marihuana Addict in the Army" give an excellent description of such parties, to which many homosexual and other perverts are attracted. Use of the drug forms a common bond, and all present lose their sense of inhibition.

Marihuana smokers as a rule prefer the society of their own kind. Non-addicts are called "squares" and are not accepted or wanted in the group. In talking with homosexuals who were not addicts we found they rarely associate on close terms with addicts. Homosexuals who were addicts had two circles of friends, one of homosexuals like themselves, and the other of addicts. Marihuana addicts consider themselves on a different level of society with certain common interests, among them the enjoyment of marihuana. They prefer the society of "freaks"⁸ or "tea hounds" to so-called "squares." There was a recognition of being social outcasts and of living in a world of different standards.

Many of these men frankly admitted that only when under the influence of marihuana were they able to enjoy homosexual and perverted behavior. The sense of shame and disgust disappears under marihuana to be replaced by the over-powering desire for

⁷ Mayor's Committee, *Ibid*, pp. 13-14.

⁸ According to one man, "Something wrong with everyone of us and we put on a wonderful show just like at a circus."

sexual gratification at the level of infantile behavior.

RECOGNITION OF ADDICTS

These addicts readily admitted ability to recognize other addicts, either by their eyes or by the use of slang. They were vague about the eye-signs, although a narrowing and glittering of the pupils was mentioned by several. "The police get mad when they see us wearing dark glasses. They know we are not wearing them to keep the sun out of our eyes."

Use of slang was a definite means of recognition among strangers. Walton furnishes a few terms,⁹ and the conversation of the

addicts interviewed by Marcovitz and Myers is very striking. The casual use of the word "solid" with the reply "solid" is often the opening for further exploratory remarks. There is a ritual handshake, a brushing of palm against palm.

"Are you sticking, Jack?" (Do you have or use marihuana) one asks.

"How long since you been up there?" (How long since you have had any marihuana) is the reply.

Other examples of slang:

"How about straightening a guy out?" (Furnish me with a supply of marihuana), which can also be said: "Where can a guy get straight?" or "Can you do me any good, daddy?"

Additional slang is listed with which illustrates the flippant attitude of the addict.

Gage, jive, weed, tea, reefer, shit.....	Marihuana.
Black gold	An expensive hemp of great strength believed to be imported from Mexico or India.
Dry	Weak, not full strength, in reference to marihuana.
Blow, blowing, or blowing gage.....	Smoking marihuana.
Solid	We understand each other.
Look here daddy, where can I pick up.....	Where can I get marihuana.
Are you hep.....	Do you use marihuana?
Does he get straight.....	Does he use marihuana?
I want to pickle some of that righteous junk, or, let's get on with them, or, let's knock ourselves crazy.	I want to try marihuana.
Hop party, gage party, grass party.....	Marihuana party.
Viper	Smoker or addict.
Hop head	Confirmed addict.
Fay hound	Homosexual addict.
Hip patty	White addict.
Fly	Woman addict.
Square, jasper	Non-addict.
Cat	One of the group, one in the know.
Green	New smoker.
Feel like the world's against me.....	I'm suffering from lack of marihuana.
I'm high and feeling good.....	Opposite of above.
He was high, or, he was out of this world, or, he was blind.	All refer to the intoxicating effects of the drug.
Bottle of coke.....	Cocaine.
Mary's house	Morphine.
Spirits	Whiskey.
That's a good deal.....	Yes.
Gold, lettuce, ace, mickie.....	Money.
Kneebender	Homosexual practicing passive fellatio.
Mad or frantic.....	Wonderful! or that's great!
I am very salty.....	I am angry.
The cat was mad; he was shot and beat for sleep.	That man was angry, disgusted and tired.
Let's knock Harper dead in the head and beat him for his skypiece and drain him and throw his dirty body away.	Let's open a bottle of whiskey, drink it and throw the bottle away.
Beat me pop with the righteous mop, Bam.....	Let's shake hands.
I am going to a jump. The boys will be there mad. Do you cop, pop?	I am going to a dance. My friends will be there. I you understand?

⁹ Walton, *Op. cit.*, p. 195.

So you are a hip kitty. Have you got your boots latched and your mop ready?

Sarcastic comment about one who is boasting. Literally means, "So you are a wise guy. Are your shoes shined and your fingernails clean?"

Mad pad Home.

Let's fall down to the stem.....Let's go down to the main street.

I'm going to knock myself a righteous juice.....I'm going to pour myself a glass of whiskey.

I am going home and cop myself a nod in the lily white and wake up feeling gay and bright. I'm going home and get some sleep.

I'm going to pick up a fly chick and dig a flicker...

I'm going to get a girl and see a movie.

Note that the general tone is very flippant and that there is a rhythm to the phrases. The slang terms are so striking that an addict will quickly become suspicious of a "square" if the other fails to use these terms properly or at all. As can be seen there is a vocabulary built around the use of marihuana sufficient for lengthy conversations which the "square" will find very mystifying. With this distinctive language, the sharing of mutual experiences and background, as well as the interest in marihuana, the addict definitely feels that he lives in a world of his own, separate and outside of the world of non-addicts.

SUBJECTIVE REACTIONS

A slang term furnished us with provocative information on the individual effects of marihuana smoking. This was the term, "virgin kick," *i.e.*, the reaction of the initiate to smoking. "What kind of kick are you getting?" the chronic addict will ask the new user, referring to the strange and frightening sensations and feelings of depression. The new user will be told these are typical reactions and to continue experimenting until he learns the proper dosage to take. The initiate experiences anxiety and fear over the control the drug assumes over the intellect and is panicky about becoming its slave. The chronic addict can reassure him; when told of particular moods will nod wisely and state that such a sensation is to be expected, that it will disappear later on or can be ignored. Surprisingly, addicts claim that these initial symptoms are common to all users, rather than a matter of individual experience. The initiate is warned about over-use of the drug, but encouraged to experiment until he learns exactly how many cigarettes are needed to achieve a satisfactory state of well being.

We believe, therefore, that experimenters wishing to study subjective reactions should

not stop at one or two cigarettes but use them over a period of time. Thus they may study both initial reactions and the state finally achieved by the confirmed addict. The addict is not interested in the primary sensations, in fact he tries to avoid them, being interested only in the ultimate stage of well being and confidence.

Because the first few attempts to learn the habit are somewhat disturbing, some individuals may not become addicts. Marihuana is definitely a group activity in that the new user needs the presence of addicts to encourage him in further attempts.

The addict firmly believes that he has control of the drug and can cease addiction at any time, and that marihuana is not habit forming. He can see no reason for living with anxiety tensions when smoking releases them; thus he seldom makes any effort to quit. In this respect he is much like the tobacco addict.

SOME FACTS ABOUT ADDICTION

Walton¹⁰ states that use of the drug is widespread among school children in New Orleans. On the contrary, the Mayor's Committee on Marihuana found no evidence that it was a problem among school children in New York City. They interviewed principals and watched dives near schools, but found no evidence of its use.¹¹ However in our subjects 6 or 13% began use of marihuana prior to adolescence. The largest group, 29 or 64%, were initiated in the period of adolescence, from 12 to 17 years. Another 13% began in their early twenties, and 4 in middle or late twenties. The average median age of original addiction was 15.3 years. It is realized that this might not be a true picture as our group was weighted with young infantry soldiers. Study of a

¹⁰ *Ibid.* pp 29-32.

¹¹ Mayor's Committee, *op. cit.*, pp 17-24.

true cross section might reveal a higher age when the habit was begun.

The average median length of time these men had been smoking was approximately 6 years. Five or 11% had been addicted more than 10 years. None claimed to be beginners. Nine or 20% had smoked at least a year, and another 20% from 3 to 4 years. Twenty-seven or 60% claimed to be addicted for more than 5 years. A large percentage of these 27 contracted the habit during the formative years of adolescence.

Despite long addiction these men presumably were in good enough physical condition to meet army standards for induction, and were deemed fit for the toughest branch of the service, the infantry. Inability to adjust to the army situation was in terms of morale and character, not stamina.

USE OF OTHER STIMULANTS

All of our addicts used other stimulants but insisted that marihuana was the main source of pleasure, the others being substitutes or aids to increase the pleasures of marihuana. We found few among them who were addicted to use of cocaine, morphine or heroin, although a number had tried them briefly. Many used what they called "geronimos," small pills which, according to the patients, contained morphine in a mild dosage. Again, these were used only when marihuana was not available. We are, therefore, inclined to agree with the Mayor's Committee on Marihuana that marihuana smoking in itself does not cause addiction to such narcotics as cocaine, morphine or heroin.¹²

Whiskey was commonly used in conjunction with marihuana, but rarely to excess. Sodium amytal, called "pink ladies," seconal, barbitol, benzedrine, nembutal were used daily along with marihuana. Nutmeg smoked in powder form mixed with tobacco was tried as a change. In connection with these drugs the following slang is given:

One addict will ask, "Have you seen Bennie lately?" (Have you used benzedrine recently.) The other may reply, "No I've been with Meg all night" (used nutmeg). Nutmeg is also referred to as "the lady."

In the hospital, where the drugs could not be obtained, a common practice was that of smoking aspirins crushed and mixed with tobacco. The opinion was unanimous that it was of no help.

The number of marihuana cigarettes smoked daily varied according to the individual. Some smoked from 1 to 2 daily and others as many as 10. The majority used from 4 to 6 daily. The marihuana was not diluted in any way or mixed with other substances. The dried leaf or top of the plant is rolled in cigarette form and sold commercially.

ATTITUDE ABOUT HARMFULNESS OF MARIHUANA

Not one of our subjects had any desire to stop addiction or be cured. They admitted voluntary cessation at times and therefore claimed the drug was not habit forming. They defended its use on the grounds that it left no physical after-effects. There was a sizeable minority who thought it was harmful but still refused to consider any cure or the grounds that the benefits of marihuana outweighed the harm.

All said their addiction to marihuana was a benefit to the Army as it enabled them to be adequate as soldiers. They therefore argued that the Army should permit them the continued use of the drug. These arguments were highly rationalistic in view of their army record to date. Nevertheless they stubbornly defended its use with the childish attitude of "I can't be a good soldier unless I smoke marihuana, and I'm such good one then that I should be permitted to smoke."

Because of these attitudes we cannot agree with Marcovitz and Myers in their contention that long-time institutionalization for treatment of the personality pattern is the answer. The desire to be cured is lacking, the background and personality pattern are too well established for any hope of curative treatment. Institutionalization may be necessary to protect society from these individuals but not from the standpoint of treatment.

As ward patients in the hospital these men were nothing but nuisances. They had to be kept restricted to the ward to prevent access to marihuana or other drugs.

¹² *Ibid.*, p 13.

allowed freedom on the ward they somehow obtained the drug no matter how closely visitors were watched. They were aggressive and sulky with ward attendants and personnel, and continually complained of various ailments. They were resentful when returned to duty; in one instance military police had to be called. When attempts were made to sedate them with seconal they bothered the nurses and ward attendants constantly for hours before the time to receive the drug. Only during interviews when the men were talked to in a kindly, sympathetic manner was there any change in attitude. During the interview periods they complained at first of myriad aches and ailments, but soon spoke freely, in fact loquaciously. They bragged about their behavior, anti-social and sexually perverted as it was. Feelings of anxiety which they attributed to the drug deprivation disappeared in the course of the interview because they were able to represent themselves as adequate individuals in terms of their own standards.

DISCUSSION

It can be seen that these men possess traits of character and behavior which readily brand them as psychopaths. The basic cause of their psychopathic personality was the broken home, marked by quarrels and disagreeable scenes. Their parents were definitely incompatible. In terms of parental images many of the patients had a righteous, moral mother and a worthless father. Many of them were an only child, or the youngest or oldest in the family. Such children suffer from their family position either by too much attention or by intensification of the conflict between them and their siblings for the love of the mother.

From an early age there was a swing to delinquent behavior despite the mother's efforts at control. There was definite identification with the father image and a reaction to maternal control. This caused delinquent behavior in school and anti-social activities, as well as avoidance of responsibilities. Undesirable associates, sex promiscuity, truancy and even addiction to marihuana are typical in the school years.

The pattern established is very well described by Marcovitz and Myers:

A typical pattern of response to repeated situations of frustration and deprivation. This consists on the one hand of immediate and constant gratification of the need for sensual pleasure and for the feeling of omnipotence, as well as the need to overcome their unbearable anxiety. On the other hand they show hostility and aggression toward others, especially to authority with the neurotic repetitive creation of situations which lead to further sufferings.¹³

Their work records followed the same behavior pattern, with frequent changes of jobs. Associates chosen were always those with similar psychopathic interests. As adults, as in adolescence, sex satisfaction was the predominant drive. This was permitted expression through marihuana on various levels of development. The drug was also used to build up confidence in the conquest of women. Marihuana and sex satisfaction are definitely associated in these individuals. They revealed frequent attendance at private parties where there were both marihuana enjoyment and sexual orgies, with marihuana addiction the common bond among all present. Defiance of sexual codes with gratification of infantile sexuality at different levels was achieved.

Conflict with the law is an aspect of the psychopathic personality manifested by marihuana users. There is little evidence that marihuana creates criminals, but it does seem to restore the confidence which a criminal personality needs. The behavior of these addicts shows a disregard for law which is based on selfishness and resentment to authority.

Judging from the comments of the men studied, as well as from the analysis of their personalities, it seems that marihuana is used to restore confidence by the removal of anxiety and resentment, and that it also relieves actual physical feelings of depression and pain. The user gains both physical and psychological contentment and reassurance, finds himself able to gratify strong infantile desires, and becomes an adequate personality able to cope with his environment. Marihuana dispels feelings of anxiety resulting from earlier conflicting attitudes of the par-

¹³ Marcovitz, *op. cit.*, p. 391.

ents, and thus permits the satisfaction of libidinal desires at various levels of infantile sexuality. Strong homosexual tendencies are also present in many addicts.

SUMMARY

1. Sixty infantry soldiers, 55 Negro and 5 white, were studied to determine the basis for their addiction to marihuana.

2. Case histories reveal a background of psychopathic development and behavior.

3. Eighty-five percent of these men were referred for psychiatric evaluation because of poor records as soldiers, and the remainder for neurosis.

4. Median average age of the men was 22.4 years, and the median average length of service was 5.9 months. Only 2 men had desirable army records.

5. Thirty-eight or 63% had a history of homes broken in childhood by death, desertion or separation. Another 13 or 22% also had home environments where quarreling, domestic strife among parents was common.

6. Thirty-five percent were the only child in the family and 28% either the youngest or oldest in a large family.

7. Thirty-four of the men came from poverty-stricken levels.

8. Patients' memories of parents revealed 95% had mothers with high standards of morality and 68% had fathers of poor moral character.

9. Early childhood memories were of definite emotional strain, as revealed by frequent nightmares, history of enuresis, sleep disturbances, dizzy spells.

10. Only 11 of the men had gone as far as high school, although intelligence tests showed them all to be of normal intelligence.

11. Typical school behavior was one of truancy, arguing or fighting with teachers, gambling, sex promiscuity, associating with undesirable companions.

12. Work history shows a similar trend of psychopathic development with frequent changes of jobs and much unemployment, little desire to work. Marihuana was used frequently during work to relieve monotony.

13. Fifty had criminal records. Marihuana was used to furnish confidence but it was not the cause of criminal activity.

14. Strong abnormal sexual desires were present with an overlay of anxiety. Marihuana was used to remove anxiety and result was an over-emphasis on sexual pleasures on various levels of infantile sexuality.

15. Addicts associate only with other addicts and non-addicts are avoided. Recognition of other addicts is primarily by use of slang terms.

16. First attempts to contract the marihuana habit are believed to cause startling experiences but the user soon is able to control dosage and accustom himself to the drug to a degree sufficient to allay anxiety.

17. Six or 13% began use of the drug prior to adolescence; 29 or 64% started in the adolescent years, and the rest in early and late twenties. Median average length of addiction was 6 years.

18. Subjective effects of marihuana are described as tending to restore confidence, remove anxiety and eliminate physical pain.

19. Use of other stimulants with marihuana was common but marihuana is used as the primary pleasure. Quantity of marihuana cigarettes smoked daily is an individual matter but the majority used from 4 to 6 daily.

20. None of the men had any desire to be cured. Because of this, as well as their psychopathic background, prognosis for treatment is poor. They are a problem not only to the Army, but as patients in the Army hospital.

21. The personality pattern of these men is one of strong libidinous desires resulting from early home conflict, a weak ego which identifies with an undesirable father image, and a superego created by the moral mother. The superego is unable to prevent undesirable behavior but is able to create intense anxiety. Use of marihuana removes the superego which in turn strengthens the ego and enables it to satisfy the libidinous desires at various levels of infantile behavior. Homosexuality is evident in many of these men.

PSYCHIATRIC ASPECTS OF UREMIA¹

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It has long been recognized that in uremia there occurs an autointoxication that may result in damage to many of the body tissues. Since some of the most common symptoms in this disease, namely, the convulsions and the lethargy, indicate cerebral involvement, it at once becomes apparent that the central nervous system does represent at least one of the most important regions of toxic injury. The importance of the cerebral damage in uremia as related to the widespread clinical symptomatology was well recognized in the older literature, but seems to have been ignored in many of the recent writings (Hechst(1), Mikuriya(2), Hiller and Michalovici(3), Bodechtel(4), Weil(5), Weiman(6), Rives(7), Silvan(8), Uchida(9)).

In a recent investigation we had the opportunity of studying the brain changes in 7 cases of uremia. It was apparent that this disease produces severe and often irreversible changes within the cerebral tissues. The type of alteration varied with the duration of the illness. In the acute cases the predominant damage occurred within the neurons which showed the typical picture of acute nerve cell damage. In the subacute and chronic illness, the neurons revealed chronic changes such as pyknosis and fragmentation. In most of these cases parenchymal alterations were prominent and appeared as areas of tissue necrosis and demyelination. It has been accepted that such extensive tissue damage might very well result in varying neurological disturbances such as convulsions, monoplegias, hemiplegias, ataxias, etc. Many reports of such dramatic disturbances are available in the literature (Rothman(10), Weisenberg(11), Boinet(12), Hiller and Michalovici(3)). However, in spite of the definite evidence of tissue injury in uremia, it has not been gen-

erally realized that these same diffuse alterations may so disturb cerebral function as to result in a host of personality disturbances that may obscure the underlying organic pathology. It is for the purpose of emphasizing these psychic alterations in this disease that the following case is reported followed by a brief résumé of some of the literature on this subject.

CASE REPORT

E. D. (H. N. 635285), a 27-year-old white male, was admitted to hospital August 29, 1939, because of disorientation, restlessness and bizarre behavior. This patient had always been a well adjusted, friendly individual. He had lived harmoniously with his family and friends, showing no abnormal moods or behavior. He had always taken part in church and social activities and had been a great help to his brother in business. During the past 4 years he had been troubled with epigastric distress for which he had taken soda for relief. Six months before admission he suffered a recurrence of his discomfort, vomited frequently and began to lose weight. In June, 1939, he was hospitalized and an x-ray revealed a duodenal ulcer. After leaving the hospital he did poorly as far as his ulcer was concerned in spite of exerting care as regards his food and general régime. In July, 1939, he continued to vomit almost daily, showing a weight loss of over 35 pounds. Aside from this weight loss he appeared and felt fairly well. He was again placed under medical care but continued to vomit.

On August 24, 1939, his local physician suggested hospitalization and the patient enthusiastically agreed to such a move. However, within a few hours he became slightly disturbed because he felt that "the papers would advertize about his receiving free aid." This was the first indication of any abnormality in thinking. Shortly afterwards "his nerves gave way." He began to weep and show mild catatonia, clenching his fists, drawing his knees toward his chin and remaining so for many hours. At times he would become restless and excited while on other occasions he would lie quietly in bed staring at the ceiling. He was immediately removed to a local hospital. During the first few days in hospital he behaved in a normal manner except for a slight restlessness which gradually increased in intensity. On the third day he became confused and expressed auditory hallucinations. He greeted his father by saying, "Come on let's sneak out now,"—"Don't you see them?" He

¹ From the Department of Neuropsychiatry, University of Minnesota. This study was aided by a grant from the University of Minnesota Graduate School.

hugged his father tightly and repeated three times, "She thinks she's too good for me." Because of the increasing severity of his illness, he was transferred to the University Hospital. On his way to the hospital he became completely disoriented, mistaking the ambulance driver for his brother-in-law.

On admission, the patient appeared acutely ill, exhibiting evidence of marked weight loss, weakness and dehydration. His blood pressure was 112 systolic and 78 diastolic. He was very negativistic, mute and demonstrated some regressive behavior with fecal and urinary incontinence. On persistent questioning he would admit having stomach trouble and occasionally complained of abdominal distress. At times he would recognize his brother. He seemed markedly apathetic and totally indifferent to his surroundings. He spoke very little, most of his remarks being garbled and incoherent. He was somewhat restless, picking at his bedclothes and attempting to get out of bed.

At this time a diagnosis of schizophrenia was considered. Because of the medical history, complete laboratory studies were done. The urine showed a specific gravity of 1016 with a trace of albumin and an occasional red blood cell. Blood chemistries revealed a blood urea nitrogen of 243 mg. percent; a blood sugar of 140 mg. percent; and chlorides of 452 mg. percent. These findings indicated that we were dealing with an unusual form of uremic psychosis.

Due to the negativistic behavior of the patient, it was necessary to resort to gavage feedings. During the first 3 days in hospital he was restless and confused. He knew the approximate date and his name but was disoriented as to place. He talked very little, most of his conversation being muttered and unintelligible. He had to be restrained as he would try to get out of bed. He frequently spit his food at the nurses or over the floor of his room. Often he would become very negativistic and preoccupied. He would spend many hours posturing and grimacing. On the fourth hospital day, after intense intravenous and gavage feedings, the patient seemed to improve. He became more quiet and there was a definite clearing of the sensorium. His speech became more coherent and he again recognized various members of his family. He stated that he felt "swell" and "would like to go home." He conversed pleasantly with the nurses, toward whom he was most polite and cooperative. He remained improved for 2 days and then suddenly relapsed into his former psychotic state. He again became restless, noisy, and at times catatonic.

During the remainder of his hospital stay he continued to manifest severe psychotic behavior except for brief intervals during which he seemed to clear somewhat and make a few coherent and relevant statements. He expired suddenly from a respiratory paralysis 7 days after admission to the hospital.

Comment.—On cursory survey, this patient presented many features of a catatonic type of schizophrenia. These consisted chiefly of negativism, mutism, grimacing

and regressive behavior. This diagnosis was considered until the blood chemistry was obtained, revealing a severe retention of metabolites. On retrospect there were certain features in this patient's illness that should have guided us in the proper evaluation of this case. These were: the presence of both delirious and schizoid symptoms; the rapid fluctuation between the psychotic and the lucid periods; and finally, the definite impairment in the patient's physical health. In fact, it was this latter observation that prompted us to study the blood chemistry.

CHARACTERIZING FEATURES OF UREMIC PSYCHOSIS

The mental picture in uremia exhibits no specific characteristics. Almost every form of disturbance has been reported, although the delirium associated with a mild depression seems to predominate. In spite of this most variable symptomatology which frequently obscures the underlying pathology, certain characteristics may be present, which should suggest the possibility of a uremia and indicate a detailed laboratory investigation.

1. *A Rather Sudden Onset.*—In the majority of cases the psychosis is fairly sudden in onset, the entire illness unfolding during a period of hours. Usually the illness reaches its peak during the first 24 to 48 hours. Occasionally careful questioning may reveal vague signs of the impending illness for a few days prior to its acute appearance. These premonitory symptoms usually consist of a mild irritability, listlessness, insomnia and some tenseness.

2. *Poor Physical Health.*—This is an important feature and should strongly suggest some complicating factor in the psychosis. The patients frequently are very weak, fatigue easily, complain of malaise and lassitude and show evidence of great weight loss. Headaches are common and often very disturbing. Anorexia is often marked. The patient makes very little attempt at physical effort, appearing apathetic with little interest for his surroundings. In many such cases a careful history will reveal evidence of a long-standing renal pathology.

3. *Frequent Remissions During the Course of the Illness.*—In many of the reported

cases, especially those receiving treatment, the psychosis was characterized by remissions during which the patient would be quiet, rather composed and entirely rational. These lucid intervals are most variable in both number and duration, lasting from minutes to days. They often appear dramatically at the height of the psychosis and disappear just as abruptly.

4. *Accompanying Neurological Features.*—The appearance of neurological disturbances during the course of a psychosis should immediately suggest the possibility of a uremic involvement. These disturbances consist of convulsions, myoclonus, monoplegias, ascending paralyses, bulbar disturbances, ataxias or amaurosis. Bischoff(13) reported motor involvement as occurring in 40 percent of the uremic psychoses. The motor involvement is frequently ascending in type, occasionally resulting in a bulbar palsy. The myoclonus occurs terminally and involves primarily the upper limbs. The convulsions are probably the most frequently recognized uremic symptom. They precede or accompany the psychosis and are usually generalized.

5. *Poor Prognosis With Rapid Downhill Course.*—As would be expected, because of the underlying disturbance, the prognosis is usually poor. The duration of the illness is fairly short, lasting but a few weeks and terminating fatally. Such a rapidly fatal course is unusual for most of the purely psychogenic disturbances and should suggest organic involvement.

6. *Blood Chemistry Studies.*—An investigation of the blood urea nitrogen level will almost always establish the proper diagnosis. Any patient suffering from a psychosis in which some of the above listed features are present, warrants an investigation of the blood chemistry in an attempt to determine the possibility of uremia as the causative factor in the illness.

CLINICAL FORMS OF UREMIA

Aside from the above general features, the clinical symptomatology in uremia differs considerably from case to case. An attempt will be made to list the most common clinical syndromes along with the authors who described such cases.

1. *Asthenic Form* (Lemierre(14), van Hauth(15), Reiss(16)).

The chief symptoms are malaise and lassitude gradually progressing to lethargy. Physical fatigue is marked, the patient often staggering when walking because of lack of strength. Memory is poor, concentration is difficult and sleep is superficial. The patient can be awakened easily and answers questions slowly but rationally. Such patients often appear unhappy and utterly miserable. Terminally they may become mildly confused. The lethargy may pass into a coma which ends in death. Reiss(16) reported 6 such cases while Lemierre(14) recorded 2. In both of the latter the uremia was mild and the patients recovered completely.

2. *Acute Delirium* (Meninge(17), Reiss(16), Jacobson(18), Jolly(19), Bischoff(13), Marcus(20), Merklen(21), Kleudgen(22)).

This is by far the most common picture presented by patients with uremic psychoses. These patients are apprehensive, restless, bewildered and confused. They may be quiet and muttering or may show a severe acceleration of psychomotor activity with periods of excitement which may terminate in exhaustion. Hallucinations are frequent, fleeting and often terrifying in nature. They usually involve the auditory and visual spheres. The mood is changeable, occasionally being happy but more frequently revealing a marked anxiety accompanied by hypochondriacal complaints. Delusions when present are transient and persecutory and self-condemnatory in nature. Speech is frequently slurred, mumbled and incoherent, often shifting from mutism to marked flight with rambling. The entire course of the illness may shift rapidly from states of overactivity with aggressiveness, crying, laughing, singing, dancing and swearing to states of lethargy with incoherent muttering, self-condemnatory delusions, mutism, or even catatonia. Brief lucid periods may appear throughout the illness, passing abruptly into the psychosis. Accompanying neurological disturbances were reported by Bischoff(13), Marcus(20), Merklen(21), and Kleudgen(22). These disturbances were not consistent. Marcus observed convulsions; Merklen, myoclonus; Kleudgen, paralysis; and Bischoff an amaurosis. The course in

this form of the illness is variable, most of the patients passing from a state of exhaustion into a coma which terminates fatally (Reiss(16), Jacobson(18)). Some patients after a stormy course tend to recover. In such cases, convalescence is very slow and some symptoms may persist for many months. Jolly(19) reported a case of acute uremia in which the kidney function returned to normal 2 weeks after the onset of the illness, but the mental symptoms persisted for over a month. Dr. Marcus'(20) patient, memory weakness was still present 10 months after the acute illness.

Not infrequently this delirious form of uremia is accompanied by features which are definitely schizoid in nature. These symptoms will be discussed under the schizophrenic form of this disease.

3. *Schizophrenic Form* (Grimshaw(23)).

Grimshaw reported a case of a 25-year-old male who suffered from a chronic uremia. This patient showed marked catalepsy associated with periods of catatonic excitement. His limbs would remain for long periods in whatever position they were placed regardless how awkward. Negativism was present, the patient refusing to eat. Pinching and pricking of the hands and arms were unnoticed. Even applications of an electric brush seemed to produce but slight effect on the upper and lower limbs. On occasions the patient would arouse from his catatonia and mumble a few oaths. His conversation on such occasions was often obscene or very religious. The patient gradually became more debilitated and died. Terminally he had some oliguria.

Frequently many of the schizophrenic symptoms appear to color the other clinical forms of uremia. These symptoms consist of negativism, catalepsy, grimacing, posturing, echolalia and bizarre auditory hallucinations. Bischoff(13) felt that when these symptoms accompanied the psychosis they were not due entirely to the uremia but were chiefly the result of a "taint" within the patient's make-up and that careful questioning would elicit the basic taint within the patient or the family background.

4. *Depressed Form* (Cullerre(24)).

This form is characterized by a melancholia often associated with suicidal trends. There may occur only a simple depression

associated with ideas of persecution, self-condemnation and apprehension. At times these patients may show extreme anxiety with marked motor excitement and rapid physical prostration. There may exist a fear of poisoning or death, or a desire to run away. In the two cases reported by Cullerre, the course of the illness was rapidly downhill, both patients lapsing into coma prior to death.

5. *Manic Form* (Scholz(25), Hagen(26), Wilks(27)).

These patients are markedly overactive, combative and destructive. They frequently laugh, sing, yell or chatter continuously, often in a boisterous voice. They may tear their clothes or the bedclothes or may break the furniture. Usually the sensorium is clear in spite of the psychomotor overactivity. They frequently become feeding problems as they are too busy to eat. Fleeting hallucinations may be present. At times the overactivity is suddenly interrupted by brief periods of depression during which the patient is gloomy and despondent. All the cases reported terminated fatally. In 2 of the 3 cases reported by Wilks there were associated convulsive seizures.

6. *Paranoid Type* (Hoesslin(28)).

Hoesslin reported a case of a 46-year-old male with chronic nephritis who suddenly developed expansive ideas. He believed that he belonged to nobility and was having conferences with kings. These delusions of grandeur continued for days. The patient suddenly recovered from his psychosis and was much distressed over his former ideas.

SUMMARY AND CONCLUSIONS

1. Uremia may result in irreversible damage to the central nervous system. These tissue changes may so disturb cerebral function as to result in a host of personality disorders.

2. A case of uremic psychosis is reported occurring in a 27-year-old male who had a blood urea nitrogen of 243 mg. percent.

3. Clinically a uremic psychosis may resemble almost any of the recognized varieties of the psychoses.

4. Certain features, when associated with any of the clinical forms of this illness, aid greatly in the diagnosis. These consist of: a rather sudden onset; poor physical health of the patient; frequent remissions during

the course of the illness; associated neurological findings; and a poor prognosis usually with a lethal outcome.

5. A review of the literature is attempted with a listing of the types of clinical pictures described by the various authors.

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THE LIFE AND WORK OF KARL WILMANNS

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Word has reached us that in August 1945 Karl Wilmanns died, 72 years of age. For the last years he lived at Wiesbaden, where he had taken refuge after being forced by the Nazis to leave the university and the town of Heidelberg. A few weeks before his death he received a letter from the newly appointed rector of the university, asking him whether he was willing to return to Heidelberg and to assume for a while, in spite of his years, the burden of his former position. Although he was not able to accept this offer, it brought him, in the midst of the German disaster, some belated personal satisfaction. He had foreseen the catastrophe the Nazis would bring about; he had also foretold it, even to those who did not like to hear it. But perhaps they did like it, for it provided them with the welcome opportunity to get rid of a man, whose ironical criticism they had to fear.

Wilmanns was born July 26, 1873, at Durango in Mexico. In 1879 his father, a businessman, returned to Germany with his family and settled at Bremen. This town lent Wilmanns a definite color. Throughout his life he remained a Northerner, contrasting strongly in dialect and gestures with his south German environment. Also his attitude towards authority, a peculiar mixture of respect and disdain, had some Bremish flavor. The "Hanseates" liked to emphasize their personal independence, yet this independence was integrated into a proudly guarded tradition.

Wilmanns' education followed the typical pattern, with one exception: he stayed through all the years of his academic studies—in contrast with the German custom—at one place, at Bonn. One may find in that early period already the beginning of a conservative attitude which became more and more obvious later on. With a stubborn tenacity Wilmanns stuck to plans in which he had early invested his personal interest. Just as he had remained at Bonn during all the time of his medical studies, Wilmanns, who came to Heidelberg as one of

Kraepelin's assistants, stayed there through all the stages of his academic career; there he became instructor, assistant professor, and in 1918 full professor. He succeeded Nissl, who had accepted a call from Kraepelin to the "Forschungsanstalt" in Munich.

The most striking example of Wilmanns' indefatigable thoroughness is to be found in his psychiatric work. The problem he had taken up as a staff member in Kraepelin's Clinic—the psychopathology of hoboos—remained the chief theme throughout his life, into the last years of his scientific productivity. In 1906 he published in a voluminous monograph "Zur Psychopathologie des Landstreichers," the first results of his research. In 1940, in two papers, the last ones as far as I know, he wrote about "Morde im Prodromalstadium der Schizophrenie," and about "Das Vagabundentum in Deutschland" (the vagrants in Germany). During that period of 35 years Wilmanns continued to discuss his favorite topic. His active interest never flagged; research and publications did not cease. New experiences were added, the scope of investigation extended, the problem was approached from all possible points of view, psychiatric, legal, historical. All his work was organized around this one center, with only one deviation.

Through historical and ethnological studies Wilmanns came to assume that the chemotherapy of syphilis was a decisive factor in the pathogenesis of general paresis. It seemed to him that in countries where syphilis was treated less early and less intensively than in Western Europe and in the U. S. A., tertiary symptoms were more frequent but cases of general paresis were rare: ergo antiluetic therapy breeds metalues. In 1926 a group of psychiatrists, dermatologists, serologists, went to the Burjatian Republic (U. S. S. R.) where syphilis was endemic, but where modern chemo-therapy was unknown. His leading hypothesis was not confirmed. A thorough investigation revealed that the number of metaluetic cases was

higher than the presupposition of Wilmanns' syllogism had allowed for.

In his basic research on tramps Wilmanns had, compared with the majority of psychiatrists, one great advantage. While they, as a rule, had come to know hoboes only as inmates of jails and mental hospitals, Wilmanns studied them, like a modern cameraman, outside of confinement, under their own peculiar conditions of life, which, although not normal conditions, were natural to them.

In the paper on "Das Vagabundentum in Deutschland" (1940), which contains many personal confessions, Wilmanns tells us, how in the Bremen State Hospital his attention was called "to some interesting tramps," how Bonhoeffer's investigations on that subject increased his interest, and how finally during his own research at Heidelberg he became more and more fascinated by this topic. "The long conversations" he wrote in 1940, "with the inmates of the Kislau house of correction (Arbeitshaus) gave me the opportunity to gain a deep insight in the life of the hoboes. . . . One of them used to visit me frequently. . . . Some of the tramps made, so to speak, friendship with me. Others heard about it, so that beggars in increasing number came to convey to me the compliments of the others. I often received postcards from them with thanks and greetings. . . ." One among them, "a professional tramp" wrote on Wilmanns' suggestion a thorough paper about vagrants, illiterate in style, but keen in observation. There he described the different types with their self-given names, their special tricks of "making money," their hunting grounds, their relations to law and police, their conventions. This man in turn suggested to Wilmanns to participate in one of their "annual meetings" which occurred at some small village in Franconia during the hop harvest. It was not very long until Wilmanns was recognized by one of his former patients; but he was allowed to stay on. In his paper Wilmanns goes on with a description of the convention, mixing it with statistics of the register of punishments of the participants. He sums up his observations, half graciously, half ironically: "in short, it was a beautiful feast." Wil-

manns acquired even some knowledge of the peculiar idiom, the "Jenish," spoken by the tramps. If every language gives an interpretation of the world, the "thieves' Latin" gives its re-interpretation. The outcasts develop a vocabulary of their own, in which they give new names with a positive emotional evaluation to the very things and actions condemned and persecuted by the in-group. In studying the "Jenish" Wilmanns learned to meet the tramps on their own ground, to see the world through their spectacles, to tolerate their standards for a while. Here we may recall that Prince Henry enjoyed for some years Falstaff's company; but when Henry had become King, he banished the man "so surfeit-swell'd, so old, and so profane," granting him a wise allowance for his maintenance, and promising "advancement" in the case of "reform." We would say today he put him on probation, the outcome of which was clear to everybody. As, through Falstaff, Henry had gained insight into the problematic character of all human institutions, so the more deliberately he took charge of the duties fate had assigned to him. There is nothing in Wilmanns' works indicating that King Henry's decision would not have met with his full approval.

In Wilmanns' writings one does not find much of the solemnity of a state attorney or judge, nor of the zeal of geneticists, who persecute and stigmatize the degenerates; but one would also search in vain for the sentimental gesture of understanding, explaining and pardoning everything. Wilmanns saw the tramps as a variety of the human species, shaped by heredity and milieu. He would not have asked the author or stage director of the human comedy to cut out their part, but he clearly saw the subordinate rôle they played in the whole drama. In his judgment Wilmanns firmly and unambiguously accepted the established conventions. He never turned into a social reformer.

We still have to consider Wilmanns' work, detached from his personality. The goal of the first investigations was to study the relations between the natural disposition of the hoboes, inherited or acquired, and their conduct of life. Wilmanns started from

the assumption that in many cases mental changes caused the instability. He tried to show how "the psychosis had influenced the development, growth, and final disaster" of the tramps. Convinced of the paramount rôle schizophrenia played in these and similar cases, he took a special interest and active part in the clarification of the clinical picture of schizophrenic psychoses, their early symptoms and diagnosis.

His broad knowledge of the initial stages, enabling him to recognize prodromal stages of schizophrenia, where others still refused to see a psychotic process, brought him, as expert, in frequent conflict with the courts, administrations, public opinion, and also with other experts. In a great number of cases his judgment was justified by the final outcome. As an expert Wilmann's spoke and wrote with great passion. He was careful to protect the insane against unjust punishment and useless legal procedures, where psychiatric treatment could, if not cure, at least improve the conditions to the benefit of both individual and society.

Wilmann's did not assume that every tramp was schizophrenic, but he was convinced that in the great majority the other cases were conditioned by either feeble-mindedness and other deficiencies or by psychoses, apart from schizophrenia, mainly by epilepsy and cyclothymy. Alcoholism was a result more than a cause. Wilmann's was well aware that his conclusions could not be generalized, that they were valid under the social, economic and political conditions of Germany at the time of his inquiry. From historical studies he knew how political events and social changes have influenced the number and personality structure of vagrants.

From the nucleus of his early investigations Wilmann's extended his research in the most consistent manner. He took up one problem after the other. In 1908 he wrote a monograph on prison psychoses, followed by a study of the history of the prison psychoses, with P. Nitsche as co-author. This book has also been published in an English translation (New York, 1912). The first World War, and the following stormy years interrupted the series of larger publications. Wilmann's had to carry an enormous burden of administrative and practical

work. He resumed publication on a larger scale in 1927 with a book entitled "The So-called Diminished Responsibility." (Die sogenannte verminderte Zurechnungsfähigkeit). In this book Wilmann's discussed the problem which was in the focus of public interest as it had been planned to introduce the concept of "diminished responsibility" into the Penal Code. Wilmann's did not favour the innovation; in a broad discussion of all pros and cons he gave his reasons. The theme of the book has lost its timeliness, but not the book itself. It is a model of monographic presentation, one central problem being followed up in all its ramifications.

Wilmann's name will remain connected with another monograph, although not written by him. Under his editorship members of the staff of the Heidelberg clinic wrote the volume "Schizophrenia" in Bumke's Handbook of Psychiatry (1932). In the preface Wilmann's formulated the general points of views accepted by himself and his collaborators. "We do not take the symptom groups denoted as schizophrenia, for the expression of *one disease entity*. . . . We can compare our knowledge of schizophrenia in its present stage with that of general paresis at a time when certain physical signs were not yet known. It was clear to us that the term general paresis comprised a variety of diseases but we did not doubt that the nucleus was an entity. Similarly we believe that the nucleus of all the cases we comprehend today under the title schizophrenia has to be seen as one essentially *uniform* disease, in spite of the variety of symptoms, developments and final states. We assume that schizophrenia is an endogenous disease, organic or toxic, its origin unknown." The monograph was the result of teamwork; most of its writers are psychiatrists well known beyond the German frontier. I mention only the names of Homburger, Mayer-Gross, Beringer, Gruhle, Wetzel, Steiner, A. Strauss. The book is characteristic of the spirit of the Heidelberg Psychiatric Clinic under Wilmann's administration. There was a group of scientists, independent in their opinion, free in their expression, united by a common enthusiasm stimulated by their controversies, but co-operative in their work. The investigation

of the postencephalitic psychoses, the studies of mescaline and hashish intoxications are typical results. They bear the stamp of the Heidelberg school; accuracy in detail, broad clinical experience, intimate knowledge of the literature, a wide horizon of inquiry, all of them qualities characteristic for Wilmanns' own work and personality. He belongs to an epoch when in Germany the

power of the state and the freedom of the individual were still balanced, when the psychiatrist was still considered the helper not the jailor of his patients, when there was still room for the sick and the eccentric, because there was a general appreciation of the limitations of all human beings, one group not yet claiming to be absolute, one man not claiming to be God.

THE SALMON MEMORIAL LECTURES, 1945

THE BIOLOGY OF SCHIZOPHRENIA

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These three lectures on schizophrenia, aimed at a biological appraisal of this disease, summarize a portion of 18 years of research conducted by the Worcester group of scientists under the direction of the lecturer. Studies at the physiological level receive chief attention. The general over-all meanings of the studies and suggestions for further research are emphasized.

Schizophrenic distortions of personality are almost as varied as the manifestations of human nature itself. The approach to this problem must be directed to three goals: the nature of man, the nature of the distorting forces, and the detailed picture of the distortions.

In the first lecture, "The Biology of Man in Relation to Schizophrenia," a general review of the fundamental philosophical and scientific concepts contributing to the understanding of man is presented in detail. In unfolding the panorama of our fundamental knowledge of different organization levels (electronic, atomic, molecular, and especially the level of consciousness) the lecturer is dealing with the problems of colloids, enzymes, vitamins, hormones, protoplasm, animal structural patterns, reproduction, heredity, drives, instincts, conditioning, symbolization, consciousness, affect, psychoanalytical concepts, etc. Each level of organization possesses unique properties of structure and behavior which are not a simple collection of properties of constituent elements. Each level requires appropriate methods of research. The distortion of schizophrenic personality can be examined at each level. Special emphasis is placed on the disorder of empathy, which refers to co-identification in a social group, especially within the family. In addition to its social value, the individual benefits of empathy should be stressed, particularly its tendency to drain individual emotivity. The develop-

ment of empathy is connected, too, with the development of libido and sexuality. The schizophrenic psychosis represents the failure or distortion in the course of the evolution of man, his empathy, his sexuality. The malintegration may be conceived at any level from the atomic to the social.

In the second lecture, "The Pattern of Schizophrenia," the clinical manifestations of the disease are then depicted. Vocational, social and sexual failures were registered in the pre-psychotic histories of most of the patients, so that they represented vulnerable personalities. The lecturer describes at first the objectives characteristic of the disease and then gives a detailed picture of what psychosis means to the patient. A profound sense of personal failure conditions an intolerable loss of self-respect and stimulates different types of reactions: phantasies and dreams; delusional misinterpretation for "face-saving"; panic states. Practically nothing in this picture can be found in other orders of creation lower than man. On the human level, normal childhood and dreams offer most analogies with the psychosis.

In the third lecture, "A Biological Appraisal of Schizophrenia," detailed results of physiological studies are summarized. No significant general endocrine factors were uncovered, although about ten percent of patients presenting hypothyroid condition, in which the triad—low oxygen consumption rate, secondary anemia and scanty, nitrogen-low urine—are prominent, benefit from thyroid medication. The oxygen metabolism is definitely disturbed (average basal metabolism rate is -12). This suggests a defective enzyme mechanism. Glutathione is used to excess in schizophrenic patients. They respond less than normally to dinitrophenol, adrenin and insulin. There are distortion of Exton-Rose reactions to administere

sugar, tendencies to hypotension and a "robot type" solidarity between variations of systolic and diastolic pressures as well as of oral and rectal temperatures. The arm-to-carotid circulation time is increased. There is a suggestion of organic changes in the vestibular apparatus. Fifty-five percent of patients are underweight. Several blood vitamins are below the normal level. There is sluggishness of colon. The urine output is twice that of the controls. In addition, the variability of these and other physiological indices is significantly higher than in the controls.

In conclusion, schizophrenia is marked by

numerous defects of adaptive efficiency, leading to inadequate responses to stimuli. Defective homeostasis may be one of the manifestations of the immaturity of these patients, which is considered throughout the three lectures as one of the most outstanding features of the disease.

These Salmon lectures were delivered by Dr. Hoskins at the New York Academy of Medicine, November 2, November 9 and November 16, 1945. They will appear shortly in a volume to be published by the W. W. Norton Company under the title, "The Biology of Schizophrenia."

REPORTS OF COMMITTEES

REPORT OF THE SPECIAL COMMITTEE OF THE AMERICAN PSYCHIATRIC ASSOCIATION, HELD AT THE NETHERLAND-PLAZA HOTEL, CINCINNATI, OHIO OCTOBER 27-28, 1945

It will be helpful in the consideration of the report about to be given to review the history of the committee offering the report from the time of its inception.

At the meeting of The American Psychiatric Association in Philadelphia in May, 1944, a resolution was offered to the Council signed by a number of older members of the organization urging that an improved plan of cooperating with the medical departments of the Army and Navy be worked out in order to enhance the usefulness of our Association to the war effort. It was too late for the Council to take action on this resolution at that time.

At the December, 1944, meeting of the Council this same idea was presented by several members of the Council and by invited guests, including General William C. Menninger. The latter, in particular, urged that certain functions of the Association be expanded so as to make provision for needs felt by the Army relating to psychiatric problems during the war and in the postwar period. This idea was taken up by several members of the Council and enthusiastically endorsed. A resolution was passed authorizing the President to appoint a committee to consider ways in which the structure of the organization might be altered to provide better machinery for meeting the responsibilities of an expanded program.

Attached to this resolution was the specific suggestion that a medical director be selected. This specific assignment caused the committee considerable embarrassment since, after long deliberation during which the committee had the benefit of the counsel of the Executive Assistant, Mr. Austin Davies, it was the conclusion of the committee that this would not be a feasible step.

On the other hand, the committee felt it to be the import of their assignment to make proposals to alter the structure of the organization so as to make it possible to provide greater realization of the ideals, purposes and objectives to which our Association is dedicated, for the execution of which, according to the present constitution, the President alone is responsible. The committee felt, however, that the proposed changes would necessarily involve changes in the constitution and thus were not strictly or immediately within its authority or wisdom.

At a special meeting of the Council held in Chicago on January 31, 1945, the committee made its report, stating the above conclusions and then making the following suggestions:

The committee suggested that without altering the present constitution it might be possible to employ a number of full-time men to administer and

execute certain functions, including those of creating better public relations and providing for popular education; improving psychiatric education; establishing clinical standards in hospitals, clinics, universities; stimulating scientific investigation, research, publications, etc. Attention was called to the fact that such an expanded program would require provision for financing, either through increased dues or contributions. It was suggested that funds from outside the organization might be obtained.

The committee further recommended at that time that its personnel be enlarged to include a number of outstanding members of the Association, particularly: Dr. Alan Gregg, Dr. Robert H. Felix, Dr. Frank Fremont-Smith, General William C. Menninger, Captain Francis J. Braceland, and Dr. M. A. Tarumianz.

This report provoked considerable discussion from the Council, and it was finally accepted with practically unanimous approval. The expressed wish of the committee to resign was rejected by the Council. The Chairman of the committee explained that the task involved was a prodigious one and certainly deserved the employment of some full-time assistants or at least the help of certain experienced counselors.

The Council did not see fit to enlarge the committee but made an appropriation which the committee was authorized to use in order to obtain expert advice. These funds were called upon to a limited extent (total of less than \$500.00 being expended) in solicitation of the opinions and advice of numerous persons consulted, among whom were the following:

- James Hamilton, Administrator, New Haven Hospital, New Haven, Connecticut, Past-president American Hospital Association.
- Claude Munger, M. D., Administrator, St. Luke's Hospital, New York City.
- George Bugbee, Executive Secretary, American Hospital Association, Chicago.
- Malcolm MacEachern, M. D., Director, American College of Surgeons, Chicago.
- Maurice Norby, Research Director, Commission on Hospital Care, Chicago.
- Commander Arnold Emch, Administrative Assistant to Surgeon General McIntire, and formerly Assistant Executive Secretary, American Hospital Association, Washington.
- Michael Davis, expert on medical economics and professional organizations, New York City.
- Howard Russell, Director, American Public Welfare Association, Chicago.
- Frank Bane, Director, Council of State Governments, Chicago.
- John R. Stone, Business Manager, The Menninger Clinic, Topeka, Kansas.
- William L. Benedict, M. D., Executive Secretary, American Academy of Ophthalmology and Otolaryngology.

The suggestions and counsel of these advisers were taken into consideration by the committee, as were certain other data shortly to be mentioned.

Additional data which were considered by the committee were: (a) the private opinions offered in personal communications by a number of members of the Association including the President; (b) the responses from a small percentage of the membership received to a mimeographed letter signed by the committee and sent to all members of the Association in April, 1945.

The basis for the distribution of this letter was as follows: Prior to the meeting of the Council in Chicago in January, 1945, there appear to have been a number of rumors abroad to the effect that a small group of dissatisfied members were undertaking to initiate a reform and reorganization of the Association. In response to these the committee asked that its membership be enlarged and regretted the Council's decision not to enlarge the committee.

To counteract the misapprehensions of a small minority of the membership, to inform all members of the organization, and to overcome in some degree the lack of representativeness of the committee, the letter mentioned was sent to all members in April, 1945. This letter reviewed the history of the appointment of the committee and summarized the discussion of the committee thus far; mentioned the fact that the committee did not concur that it was feasible to appoint a medical director; suggested the possibility that a number of executive secretaries might be appointed to carry out certain functions; raised the question as to whether or not such an expansion was desirable and how it might be financed; and ended by requesting that each member of the Association write to the committee and express himself with respect to certain questions.

Certain questions were formulated after conference with a considerable number of members of the Association. These were as follows:

- (a) *With what features of the Association are you personally most dissatisfied?*
- (b) *What specific suggestions have you for improving the Association?*
- (c) *Are you in favor of an expanded program assuming that it will cost you something in the way of increased dues?*
- (d) *What direct personal benefit would you hope for as a result of such an increase in your dues?*
- (e) *Would you be inclined to favor regional groups and regional meetings within the Association in order to facilitate program presentations, personal contacts with officers, et cetera?*
- (f) *Would you welcome a more frequent and effective means of intercommunication through a fortnightly bulletin?*

To the dismay of the committee approximately 92% of the membership of the Association made no reply to this letter. Since the data taken into consideration by the committee included the replies from only approximately 8%, we would like to pre-

sent a general summary of this material with some specific examples of the replies received.

Expressions of opinion were received from 244 members of whom 42 were Canadians. There were 128 letters from individual members and 3 letters in which the views of a total of 116 other members were expressed. One of these letters contained the view of 39 Canadian members; a second letter expressed the views of 17 members in private practice in Baltimore; a third letter expressed the views of 60 members of the Philadelphia Society.

Of the 128 letters received from individual members, 28 were from members working in state hospitals, 43 from members in the private practice of psychiatry, 22 from members serving with the armed forces, 9 from members working in private mental hospitals, 12 from members working in veterans' and Government hospitals, 5 from members working in child guidance clinics, and 2 from members working in health departments.

Concerning question (a) "*With what features of the Association are you personally most dissatisfied?*", 76 out of 128 individual members definitely expressed dissatisfaction, 29 expressed no dissatisfaction, and 23 made no comment. The views of the 116 members expressed in three letters for the most part showed no dissatisfaction with the status quo, while the majority of the individual letters favor a change. If individual and group opinions are combined, it would appear that they are equally divided.

Concerning question (c), "*Are you in favor of an expanded program assuming that it will cost you something in the way of increased dues?*", 87 out of 128 individuals favored expansion; and of this number, 81 favored increasing dues to accomplish this end; 22 were opposed to it, and 19 made no comment. In contrast to these views expressed in individual letters the opinions expressed in the group letters were in the main opposed to expanding and increasing dues.

Concerning question (d), "*What direct personal benefit would you hope for as a result of such an increase in your dues?*", practically all members who replied neither expected nor desired personal benefit but considered only the general good which might result.

Concerning question (e), "*Would you be inclined to favor regional groups and regional meetings within the Association in order to facilitate program presentations, personal contact with officers, et cetera?*", and question (f), "*Would you welcome a more frequent and effective means of intercommunication through a fortnightly bulletin?*", the majority who replied were in favor of having both regional groups and meetings and having a fortnightly bulletin or more frequent publication of the JOURNAL.

The following sample letters present typical replies on both sides of the various questions:

"In the circular letter issued by the Special Committee on Reorganization, you ask for the comments of members of the APA upon six specific questions.

"To those questions I comment to the effect that there are no features of the APA with which

I am dissatisfied. I am not in favor of an expanded program but I do not object to any increase in the dues if the Association needs the money. I do not think any benefit would accrue to me, and, to the majority of the members, as a result of the increase in dues. Perhaps some benefit might be had from regional groups and regional meetings. I do not think we have sufficient worthwhile material to justify a fortnightly bulletin.

"In other words I do not want to see our Association materially altered. I think it is a grand, fine, old respectable organization. I do not want to see it become a chest-thumping body."

* * * *

"I am very much opposed to the proposals for a full time medical director and several other full-time officers involving a large increase in annual fees.

"Our Association has no hospitals or clinics or laboratories to direct and I see no purpose in a full-time director. Our office expenses in New York are, I think, sufficiently heavy and can well perform all the secretarial duties that might be expected to devolve on such an office. The President and Council and Committee Chairmen are all well qualified for the duties assigned to them and I do not think they should be deprived of the responsibility for the development of our Association and of psychiatric thought on this continent. The American Psychiatric Association should keep the concepts of democracy clearly before it and certainly should not surrender its democratic prerogatives in favor of a paid director who presumably would then do all our thinking for us."

* * * *

"These changes are in the direction of making the American Psychiatric a totalitarian rather than a democratic institution and are along the lines followed in the totalitarian countries prior to the opening of the present conflict.

"I am unalterably opposed to any increased centralization and I do not think any increase in fees is justified at the present time. Most of the members in Canada are in the Government service and our net salaries after the payment of income tax are at their lowest ebb for many years. The proposed increases of fees for the Psychiatric Association would be a real hardship."

* * * *

"I have no hesitation in stating that I am quite opposed to the proposed appointment of a full-time Medical Director and other full-time officers of the American Psychiatric Association if such appointments are to result in greatly increased yearly dues for membership in the Association. I would expect that if such a step is taken, there will be very few Canadians continue their membership and I, for one, would almost certainly resign."

* * * *

"I can not see, personally, where proposed changes are going to do anything except to provide jobs for several people and certainly at the present time, with the shortage of both senior and junior men, I think it highly inadvisable that any proposals of this nature should be considered."

"I find myself in complete ignorance as to what the Special Committee of the American Psychiatric Association expects to achieve by its proposed new plan. For this reason it is almost impossible for me to decide whether or not an increase in dues would be advisable at this time.

"I think the matter should be made much clearer to the various members before any radical changes are made."

* * * *

"We would like to go on record as *not* being favorable to the proposals to the American Psychiatric Association advising a medical director and other full-time officers, or of any increase in dues.

"We would rather see the American Psychiatric Association advance and develop along its present lines. Anything savouring of high pressure salesmanship, radical ideas or too much psychoanalysis, etc., may only damage psychiatry in the eyes of the rest of the medical profession and the public."

* * * *

"The feature I am personally most dissatisfied with is the lack of rapport between the Association and its members and the public. Aside from the Magazine and the Conventions I wouldn't know the APA exists. That brings up the matter of how to improve the Association. I believe it ought to be directly concerned with psychiatric education and standards in medical schools and particularly in state hospitals. The care of mental patients in these hospitals is primitive and I believe a disgrace to right-thinking psychiatrists. There should be direct supervision of these hospitals and, where political control obviates it, means should be taken to effect a change. Next comes public education. In my experience, I find that in general psychiatry is held in low esteem and repute by both the public and general practitioners. For that reason we are not consulted when we can be of the most use. We are avoided and mental illness is still looked upon as a stigma and something to hide. A regular series of educational articles could be run in national magazines. A model would be similar to those advertised by Parke-Davis Company—the patient who called his doctor when he had a pain in the belly and the one who didn't but is now convalescing from peritonitis; the patient who saw his doctor when he first developed a cough and the one who didn't, but is now spending his days in a The sanitarium; etc.

"I am in favor of an increase in dues provided it results in an expanded program. The satisfaction I would get would come from the attempt at accomplishment of these suggestions. I would also be in favor of regional groups and meetings, but not so frequently that they would lose their zest. A bulletin, such as the present notice, giving forth the work of the Association, say every 3 months, would be appreciated."

* * * *

"In reply to Dr. Karl Bowman's letter of April 9th, I would like to offer my views. My chief point of dissatisfaction lies in the feeling that the APA is not truly representative of enough areas in psychiatric work. Specifically, I feel it is more representative of the state hospital groups than of psychiatry in general. The university groups have not always had repre-

sentation or an adequate place in the organization. In the last year and a half rapid strides have occurred in the area of psychiatric rehabilitation which is as yet unrepresented in the American Psychiatric Association in spite of the fact that some efforts have been made to bring this to the attention of the Association. I doubt that the APA as it now stands, is truly representative of the broad range of psychiatric work and workers. There is no central point at which the average member can make his own thinking and working felt. This criticism also extends to the field of psychoanalysis which clearly needs better integration with the general trends of American psychiatry.

"Somehow the Society should work out a program for really coordinating the opinions of the total membership. Even a stockholding company permits a written ballot for the election of officers. Some such plan would give a real opportunity for every member to express his preferences. In addition, I feel that the younger members of the Society are far too little heard from and the Society has been too long controlled and somewhat entrenched by a group of older, possibly more thoughtful—sometimes less active—individuals.

"I am strongly in favor of the American Psychiatric Association assuming its rightful leadership. This seems obligatorily to include an expanded program at whatever cost to the members.

"Fortnightly bulletins could be a very real help in keeping all the members informed of plans, progress and developments. It should not be an organ which would duplicate the AMERICAN JOURNAL OF PSYCHIATRY but serve a specific function in assembling, correlating and distributing pertinent facts about the organization, its developments and outstanding projects in psychiatric work.

"In short, I very much welcome a proposed revision in the function of the APA. It is a healthy trend. For some time I have thought the effective way for the younger members to have an adequate voice would be in the establishment of a junior society comparable to the Young Turks in Internal Medicine.

"I realize that such an expanded program would obligatorily call for full-time participation of one or more individuals of outstanding service and leadership. Such an individual should work in close association with a rather large advisory committee of experienced psychiatrists in order to avoid centralization of influence.

"To effect these changes I would be in favor of any increase in annual dues necessary."

* * * *

"I appreciate the opportunity to express myself relative to the Association. I wish I were better qualified to contribute something of real value. I am afraid that my suggestions are largely opinions and prejudices, but I believe they are held by more members than myself alone.

"I want to be an active participant in the activities of an active society. I want it to be strong, well-organized, scientific, aggressive. I want the President to be a man to whom I can look up, because of his scientific achievements. I want to be represented by a Director, or a group of Directors, who will lobby for me, who

will be articulate for me when I cannot be, who will visit me occasionally and help me when I need help. I want the work of the Association performed by committeemen who are interested in what they are doing, experienced and energetic. I want enough committees to cover all the work that is necessary. Liaison with medicine. I want this to be something real, not something we talk about as being necessary, but never get around to it.

"I want to pay enough in dues to feel I am investing in something alive and active. I want a return on my investment. I want membership so selective that membership in itself is of value. I want to believe that the Association will protect me as much as a trade union will protect one of its members; after all, I am in the institutional field and constantly aware of what this means.

"I want to attend meetings where I can see and hear the best; where the young man can display his talents, if any, but properly seasoned by mature judges; where the sound and the solid are presented instead of the fanciful and the spectacular.

"I am particularly interested in teaching. I want more papers on this subject, a more active committee, leadership and organization. I think there is too much confusion in psychiatry because there are too many small related societies—research, therapy and many other subdivisions being represented. I would like to see this chaos cleared by the Association taking an active interest in and directing such work. The number of small psychological societies and journals suggest lack of organization in this field—but should the same be true in ours?

"I think the Association should take the lead in all important psychiatric matters or else state its point of view. In certain fields, as rehabilitation of veterans and of alcoholics, there are numerous small groups futilely trying to work out big problems. The Association could be of tremendous value by drawing loose ends together and helping to organize and integrate the many small bodies into a few larger effective groups.

"I don't want the Association to grow in size at the expense of strength. I am not particularly keen about the meetings as they now are, at least certain aspects of them. I am not interested in the facts that so many hundreds of visitors are present, that the ladies will go on a hayride or a sleigh ride—the local Chamber of Commerce might be interested but I'm not.

"I don't like all this commercial advertising. I know where to buy Camels, Coca Colas, books, window screens, x-ray machines, electroshock apparatus and the like—if I want them.

"I don't like so many sections running concurrently. Some are a waste of time. In others, I am constantly being stepped on by spectators rushing off somewhere, I can't hear because of the visiting going on in a corner of the room. I often cannot understand the speaker's dialect. I'm tired of running all over a hotel looking for a non-existent room or waiting for permanently disabled elevators. I know where to find street fairs and railroad terminals and crowded department stores—if I want them.

"I don't want local or regional meetings substituted for a national meeting. Most regional meetings I have attended are social gatherings with second-rate, quasi-scientific programs. I

don't want a news bulletin or a bi-weekly letter of some sort. Such a thing can hardly be big enough to be of value—this isn't Rotary, and what's the JOURNAL for?

"Again I wish to express my thanks for this opportunity. I believe the Association could be of much greater help to the individual but that it could hardly be accomplished without some radical changes in make-up and policies. I would recommend an organization smaller in size, more scientific, closer to medicine, restricted in membership, with a more active and aggressive policy than has been the case in the past. I trust that you will treat as confidential the remarks that I have made. Obviously, some of them are quite out-of-line with general thinking."

* * * *

"I received your committee's report shortly after returning from overseas and am perhaps just over the deadline in answering it. However, I wanted time to reflect on your questions, to discuss the situation with other men and to compare experiences. Without such material help I shall make this as informal as possible.

"Dr. Bowman's letter concerning the discussion on the deficiencies of leadership of the APA at the December meeting indicated that the dissatisfaction that many of us feel is not limited. Many, including myself, have considered resigning in protest to the passive attitude of the APA towards problems connected with psychiatric activities in the sciences. (My experience has been entirely with the A.A.F. and it is to that branch I refer.)

"Prior to your letter the only previous evidence of interest was a demand that my dues be paid promptly. In the flurry that this created I received a statement from our Mr. Davies that some committee had made a survey and had come to the odd conclusion that we hadn't even made a financial sacrifice in entering the Armed Services. This is the best example I can give both of the lack of interest and the lack of consideration demonstrated by the APA to its fellows who have entered the services.

"I have found it very difficult to convey the sense of abandonment that so many of us feel. This is undoubtedly tied up with our total situation and the repeated frustrations and humiliations to which we have been subjected through a lack of interest, consideration and understanding of our problems. The attitude of the APA has given us a reality factor that will lead to many repercussions. We feel that when the APA took it upon itself to help recruit us it assumed the added responsibility to see that our efforts were being utilized properly and standards maintained. What ever interest the APA may have had certainly never reached to our level.

"To answer your specific questions: (a) I am most dissatisfied with the *laissez-faire* attitude of the APA towards the psychiatric situation in the armed services. This was an opportunity for leadership that could have improved the status of psychiatry and prepared us for the problems of the postwar world. I am aware that there are 'committees' supposedly interested in military psychiatry, but from the point of view of the group I have discussed the situation with, they have apparently been non-effective.

"(b) As a basis for a more effective action it would appear that a change in the internal or-

ganization of our association is indicated to insure progressive and representative leadership. The present system of nominations makes for a hierarchy which appears to seek only to perpetuate itself.

"(c) I will gladly back any expansion that includes some democratization of our association and makes it more representative of American psychiatry. However, I feel that we should do something constructive about the present organization before we compound the already existing deficiencies.

"(d) Since entering the Service I have become increasingly aware that my situation as a psychiatrist has a direct relationship to the status of psychiatry.

"(e) Any decentralization of the present organization would probably have a beneficial effect on its democratization.

"(f) Yes.

"The above opinions should be considered as representing my personal point of view. I might say that we have the nucleus of a group that will be prepared to ask many 'whys' when we are free to do so.

"I certainly appreciate the interest of your committee, even if it goes no further than that."

* * * *

CONCLUSIONS

Your committee recognized that it was faced with a complicated problem. On the one hand, it had the request of the President of the Association that a definite program be proposed. It also received from a small but very articulate minority of the membership, strong objections to the carrying out of its assignment. Finally, it was handicapped by the silence of 92% of the membership. (Members of the committee have been informed by quite a number of the members of the Association that they did not receive the questionnaire sent out routinely by the central office of the APA. The committee has no explanation for this.)

On the basis of the number of replies received, or rather not received, one might infer that a large number of the members would seem to lack sufficient interest in the affairs of our Association.

Therefore, your committee recommends that questions about reorganization be deferred pending a further expression of opinion on the part of the membership. It must be recognized that suggestions of change and reorganization, when first presented, stimulate disunity rather than unity. It must also be recognized that at present there are wide gaps in understanding between groups within the Association, representing various interests and kinds of psychiatric activity.

With that in mind, your committee believes that the number one task before the Association, deserving our best attention, is not whether to reorganize in this way or that, or to remain as we are. Neither is it to meet together and report our latest thoughts and researches in a scientific meeting, as we customarily do in our annual meeting.

Instead, we recommend that the next convention of the Association be devoted to a serious, down-

to-earth discussion of the practical problems our members meet in their daily work; that the convention be divided into discussion groups small enough to be workable; and that there be no, or at least only a few, formal speeches and papers. In setting up discussion groups the Program Committee should provide a way for members to exchange ideas about those problems with which they are most concerned. There should be predetermined topics in which they have expressed an interest. The function of the discussion group leader would be not to pontificate or expertize, but rather to encourage members of the group to put questions and express ideas of their own. Inasmuch as a majority of the membership is on the staffs of governmental hospitals, the emphasis of the convention must be on their problems.

It is the hope of your committee that out of such a meeting steps in the direction of an effective work program for the Association may be taken and that increased unity of the membership may be promoted. We recommend that the question of re-organization be referred to the incoming administration.

The idea of dispensing with a formal program of papers, and dividing the participants of the convention into working groups is not new. Educational organizations and some other professional groups have used it with gratifying results.

There are various techniques for setting up such a program. This is a matter for the Program Committee to consider. However, in order to explain more fully our recommendation we will give a brief elaboration of this idea.

One simple plan is as follows: In order to find out how many groups should be set up and around what constellations of topics, a canvass of the membership would need to be made in advance by mail, offering selections of topics and soliciting additional ones. Registration for the convention is obtained in advance by mail and assignments to discussion groups would be made in advance also, on the basis of preferences indicated. Leaders for the groups would be assigned to particular topics and each leader would have a separate room for the meeting of his group. He would remain in the same room but would hold more than one session. The participants in the first session would split up at the end of that period and, according to previous assignment, move to other groups so that each one may have an opportunity then to take part in discussions with an entirely different group of men.

The evening of the first day may be used by the discussion group leaders to report and discuss their experiences. They can also arrange for interchange of significant data between groups during the next day's session. Finally, they should decide what method is to be used for summation of the discussions and which decisions require action.

The convention may be concluded by a half day or full day during which various groups could make reports to the entire assembly, and the necessary business of the Association would be transacted.

Groups considering like topics should probably

be arranged under various sections. Sections might be organized according to various fields of interest; the following are merely suggestive:

Section	Topics
<i>Medical education</i> . . .	Medical school curricula. How should psychiatry be taught? How should psychiatry be integrated into other courses? Training standards in hospitals approved for residencies. Graduate Schools and Training Centers.
<i>Relation of psychiatry to various agencies.</i>	Welfare organizations, public and private. Cooperation with municipal, state and federal health agencies, especially Veterans Administration.
	<i>National Health Bill</i>
<i>State medical licensing boards.</i>	Examination questions. Coordination with APA
<i>Public education</i>	What functions should we perform in this field? What should be our relationship to the National Committee for Mental Hygiene?
<i>Public hospitals</i>	Budgets Salaries Training programs Building plans Relations with governmental administrative bodies Out-patient departments Boarding homes Social service Commitment laws Where and how shall we provide for the aged ill? In our hospitals? In adequate institutions? In boarding homes?

We believe the problems of the institutional psychiatrists should have a major place on the program. Seventy to eighty percent of the APA membership serves on the staffs of governmental hospitals. These men serve at low salaries, and in some instances, under conditions of political control that cripple their effectiveness. Individually and as a group they carry responsibilities far beyond those of most other psychiatrists.

Their discharged patients are not an alumni body which can lobby in the legislatures for their interests, as the alumni of the state universities can. The legislators are under pressure from the taxpayers to pare budgets. The state hospital staffs know better than anyone else how much of their energy and attention must be given to problems of economical administration, at the sacrifice of service to patients.

The road boosters and universities have their lobbies. Who will speak for the state hospitals? This is especially pertinent now when the surplus

funds of the states amount to a total of seven billion dollars.

The importance of this problem must not be overlooked. The welfare of a half million psychiatric patients depends on it. Other problems are of very great importance and deserve thoughtful discussion. Medical education, recruitment of superior students into our field, expansion of research, Veterans Administration, standards for hospitals and clinics, and the National Health Bill, are only a few of these.

* * * *

In asking the Council and Program Committee to consider this suggestion for our annual convention, we have in mind the following as the usual purposes of a convention:

To see friends working in the same field and refresh the friendship.

To exchange ideas with those same friends.

To make new acquaintances and friends.

To get stimulation and new knowledge from colleagues who make formal presentations.

Dispensing with the customary formal program and setting up numerous small groups will provide an orderly and efficient means for the exchange of ideas and for constructive thinking on those problems which are most urgent in the APA.

At the present time, when our membership faces such heavy obligations, individually and as a professional group, it is our earnest opinion that we should avoid controversial issues that may stimulate further disunity. Instead, we believe the most useful task to which we can address ourselves is an across-the-table discussion on a practical basis of the problems that hinder us in the practice of our profession.

SPECIAL COMMITTEE ON REORGANIZATION

KARL MENNINGER, M. D., *Chairman*,

LEO H. BARTEMEIER, M. D.,

A. E. BENNETT, M. D.,

SPAFFORD ACKERLY, M. D.,

THOMAS A. RATLIFF, M. D.,

CORRESPONDENCE

PINEL BICENTENARY

On the occasion of the bicentenary of the birth of Philippe Pinel the Secretary sent on Bastille Day the following letter of greeting from the Association to Professor René Moreau, Pinel's successor at the Bicêtre, and to Professor Georges Guillaín, of the Salpêtrière:

July 14, 1945.

DEAR DOCTOR:

In this year which marks the two hundredth anniversary of the birth of Philippe Pinel, and on this day which means so much to France and to the world, The American Psychiatric Association sends warmest fraternal greetings to you and to your Staff. As the fall of the Bastille symbolized the liberation of the human spirit, so did the ministrations of Pinel inaugurate a new era in the medical approach to mental disease and in the humane care of the mentally ill.

The memory of Pinel is cherished in the United States, as in all other civilized nations. Our Association wishes for you and your Staff many years of continued success in the spirit of Philippe Pinel.

Sincerely and fraternally yours,

(Signed) WINFRED OVERHOLSER, M. D.,
Secretary-Treasurer.

Translations of their replies follow:

PARIS, September 19, 1945.

bis

215 Boulevard St. Germain.

DEAR DOCTOR OVERHOLSER:

I have just received, after a long absence, your very kind letter of the 14th of July 1945 and I beg you to excuse, therefore, my involuntary delay in replying to it.

I was deeply touched by the cordial sentiments you express to me as well as to my assistants at the Salpêtrière, in the name of The American Psychiatric Association in commemoration of the two hundredth anniversary of the birth of Philippe Pinel. Please convey for me to your colleagues assurances of our very ardent and very sincere gratitude. We know, in France, all that we owe to the American Nation for the liberation of our country; we know also how much American psychiatry has contributed to the knowledge of mental illnesses and to their treatment, and we admire your work. I hope that, in the future, international collaboration with your eminent savants will go forward to the greater enrichment of the neurological and psychiatric sciences.

Accept, dear Doctor Overholser, my kindest regards.

(Signed) GEORGES GUILLAIN.

PROFESSOR GEORGES GUILLAIN.

DOCTEUR RENÉ MOREAU

PROFESSEUR AGRÉGÉ À LA FACULTÉ DE MÉDECINE

MÉDECIN DES HÔPITAUX

99, Rue de Courcelles

PARIS, 15 December 1945

DEAR SIR AND HONORED COLLEAGUE:

I received with emotion your letter of the 30th of November which brings to us the expression of gratitude and admiration of The American Psychiatric Association, on the occasion of the two hundredth anniversary of the birth of Pinel. He brought about, as you very well describe, a veritable revolution in the treatment of mental illnesses: by him all human compassion was employed in attenuating the misery and the distress of the mentally ill. He was the first to vitalize the French psychiatric school and for more than a century his benevolent influence made itself felt, transmitted by Esquirol, Magnan, Chaslin, Lèglar, Dupré. The psychiatric services of the Bicêtre and the Salpêtrière were benefited by their work and their instruction.

Today those services are closed and psychiatric instruction is wholly concentrated at l'Asile Clinique de Sainte Anne where the great traditions of French psychiatry are transmitted from generation to generation.

One of the last incumbents of the chair of psychiatry of the Faculty of Medicine, Professor Henri Claude, died recently. By a touching stroke of fate, we learned at almost the same time of the death of his successor, Professor Lévy-Valensi. Deported to Germany in 1943, he died there after humiliation and torture: the successor of Pinel, a Frenchman of striking dignity, a veteran of 1914-1918, died the victim of a persecution and a madness that threatened to destroy the world: American aid intervened in time to spare the world the accomplishment of that frightful destiny.

Your expression of affection and of solicitude is thus doubly precious to us: it evokes a memory and brings in its wake hope for the men of this country who during four years have known sorrow of heart and constraint of soul and are eager to take up again in freedom the medical work that has been interrupted.

Accept, dear sir and honored colleague, with all my thanks the expression of my feelings of profound sympathy.

(Signed) RENÉ MOREAU.

DR. C. G. JUNG AND NATIONAL SOCIALISM

In the last number of the JOURNAL appeared a letter from Dr. Gotthard Booth pointing out misconstructions and mistranslations of utterances of Dr. Jung, in a communication from Dr. S. S. Feldman printed in the September 1945 issue of the JOURNAL.

Since publication of Dr. Booth's letter two others have been received, one from Dr. Gerhard Adler of London, and one from Dr. Ernest Harms, editor of *The Nervous Child* and of the *Journal of Child Psychiatry*, both calling attention to inaccuracies in Dr. Feldman's statements.

Dr. Adler, "one of the oldest personal pupils of Professor Jung and a member of the executive committee of the Society of Analytical Psychologists in Great Britain," himself a Jewish refugee from Germany, expresses indebtedness to Jung for help extended to him and other Jews. He says:

It certainly seems rather absurd to accuse Jung of antisemitism or sympathy with National Socialism when so many of his pupils have been Jews; and none of them has ever found the slightest reason to accuse Jung of antisemitism or of being a Nazi.

Dr. Adler points out the egregious mistranslation—"admiration" instead of the correct rendering, "amazement," already referred to in Dr. Booth's letter.

On Dr. Feldman's version of a passage in the Jung article: "The Jew . . . has never had, and never will have, his own culture." Dr. Adler comments:

Whereas Jung says 'and, as far as we can see, never will have his own cultural form ('Kulturform').' Dr. Feldman seems unable to grasp the difference between 'culture' and 'cultural form' ('Kultur' and 'Kulturform') and so he prefers to mistranslate it (although Jung mentions on the previous page of his article the fact of the 'twice as old culture' of the Jew). It must be evident to everybody that the Jew in fact has not created his own cultural form (if one does not want to regard the 'Ghetto' as such), just as little as the Swiss, although they possess culture, have created a cultural form.

Further on in his letter Dr. Adler says:

I am afraid that the space which Dr. Feldman's misquotations forced me to occupy makes it impossible to go into the more fundamental questions of Jewish psychology and Jung's interpretation of it. Naturally one can hold different opinions from Jung's with regard to this problem—but they have

to be discussed on the *psychological* and not on the *political* level. Dr. Feldman's article is nothing but a repetition of the Freudian attempt to discredit Jung's psychological views by discrediting his political views. . . .

Regarding Jung's attitude toward Nazism, Adler quotes from Jung's Terry lectures on "Psychology and Religion" at Yale University, published in 1938.

Now we behold the amazing spectacle of states taking over the age-old claim of theocracy, that is, of totality, inevitably accompanied by suppression of free opinion. . . . It is not very difficult to see that the powers of the underworld—not to say of hell—which were formerly more or less successfully chained and made serviceable in a gigantic mental edifice, are now creating, or trying to create, a state slavery and a state prison devoid of any mental or spiritual charm.

Dr. Adler continues:

The consistency of all these statements with the interview in the *Weltwoche* [to be published shortly in English] which Dr. Feldman quotes is evident. Thus Dr. Feldman's article creates by mistranslation and misrepresentation of facts a thoroughly wrong and unfair picture of one of the greatest figures of modern psychology.

Dr. Ernest Harms, a pupil of Jung since 1919 and who has maintained contact with him since, supplies some facts concerning the reorganization of the *Zentralblatt für Psychotherapie* to which Dr. Feldman had referred:

This Journal was never solely or predominantly edited by Dr. Kretschmer. On its cover there always appeared the names of Robert Sommer and Ernst Kretschmer as formal editors; the real editor since about 1930, however, was Dr. Arthur Kronfeld of Berlin. The Journal was the organ of the international group of psychotherapists known as the Allgemeine Aerztliche Gesellschaft für Psychotherapie. . . . When Nazism came to power, Kronfeld, being Jewish, had to resign. Kretschmer tried to continue the Journal, but only for a short while. The Allgemeine Gesellschaft had to be dissolved. There had to be found a non-German with some authority to help, if the Journal was to be kept alive. At this point Dr. Jung was asked, who before had had no connection with the *Zentralblatt*, and who—really not with great enthusiasm—agreed to take over, if a new international organization could be created. The Ueberstaatliche Allgemeine Aerztliche Gesellschaft was founded as an association of the individual groups. This was the only way which was permissible under the new Nazi rule. Jung consented to be the first president. He did all this in order to preserve international cooperation and

to assist those amongst his colleagues who were tied down in Germany. However, as the entire development progressed, even Jung's good will slackened. We see him retire more and more from the *Zentralblatt*, which after the first year (1935) was forced to add the name of the German leader in psychiatry, Dr. Goering, to that of Jung. In the volumes after 1935 we find no more contributions or communications of any kind by Dr. Jung.

S. S. Feldman wants to represent Jung as a Jew-baiter. It would take a long article to explain the real facts of the relationship between Sigmund Freud and C. G. Jung, which have, of course, not been the happiest. We have been flooded in an almost oppressive way with information on the part of Freudians using the unkind utterances of Freud regarding Jung. S. S. Feldman tries to make use of this to demonstrate how

badly Jung behaved towards Freud who had selected him as his successor.

Dr. Harms then refers to the address of Jung at the founders' meeting of the new International Psychotherapeutic Society in May, 1934, in which he paid tribute to the work of Freud at the cost of being furiously berated by the Nazi press. Dr. Harms comments: "I have hardly ever witnessed a more noble and courageous gesture on the part of one scientist towards another."

He draws attention to the fact that besides Pierre Janet, Jung was the only psychiatrist who received an honorary degree on the occasion of the Harvard Tercentenary celebration in 1936.

COMMENT

NEUROSES AND PSYCHOSES

In the words of the old riddle, one might ask: "When is a psychosis not a psychosis?" And the answers would be as variable as the definitions of the word psychosis. The trouble is that most psychiatrists do not even bother to define the word before using it, taking it for granted that everybody knows what it means; but the word is so ambiguous that it really means very little. At first the term was used to get away from the term "insanity," which had a legal implication. There was much to be said for the nomenclature which put all mental disorders under the heading "psychosis" and divided them into "major" and "minor." But this had only a brief popularity. Recently the custom has been to call the major disorders "psychoses" and the minor ones "neuroses." If a list of the principal diagnostic entities dealt with by psychiatrists were to be made, starting with the generally less severe disorders and proceeding to the more incapacitating, the first ten headings could be:

1. Nervousness and psychosomatic reactions thereto.
2. Anxiety state.
3. Reactive depression.
4. Hysteria.
5. Obsessive-compulsive reaction.
6. Anorexia nervosa.
7. Hypochondriasis.
8. Alcoholism and other addictions.
9. Perversion.
10. Psychopathic personality.

From here the list would go on to schizophrenia, manic-depressive, senile psychoses, etc. Most psychiatrists would agree that the first five headings were "neuroses," about the next five there would be some disagreement. From there on down the list, there would be fairly general agreement that one was naming "psychoses."

There is, therefore, some basis for the use of the words "neuroses" and "psychoses" and this basis is common usage. But for scientific speech one needs more than that. Is there any acceptable generalization that differentiates the two terms? That is to say, any generalization based on scientific fact?

Obviously the division of the two by calling the neuroses "functional" is out of date. Any modern pathologist knows that there are many structural changes that cannot be seen with the microscope and all physiologists know that there can be no functional performance without structural change in the tissues involved. To make a division of nervous disorders into two great classes, "organic" and "functional" on the basis of whether or not a lesion is visible to the pathologist, is too naive to stand in scientific thinking.

Another general basis for separating neuroses from psychoses is that of psychogenesis. It is said that the neuroses are caused by psychological maladjustments, *i. e.*, troubles in interpersonal relations, sexual, social, economic, etc. On the other hand the psychoses are said to be "not purely psychogenic." For this latter statement there is plenty of evidence, for example, the hereditary factors in some psychoses and the cerebral lesions accompanying others. But there is no good evidence for the statement that neuroses are "purely psychological." Most psychiatrists agree that neuroses have important psychological factors and that psychotherapy usually is the best treatment, but that does not prove that the disorders are purely psychogenic. Good psychotherapy helps almost any sick person, whether he has cystitis, pneumonia or paralysis agitans! Moreover, the man who did most to elucidate the psychological mechanisms of the neuroses, Sigmund Freud, believed that in neurosis there were hereditary and chemical factors, as well as the psychological.

It has been held that neuroses are "part reactions" as opposed to psychoses that are "whole reactions." This, however, seems to offer no really clear-cut distinction. Granted, that a depression is an overwhelming reaction that seems to affect the total personality, yet people in mild depressions (of undoubted manic-depressive reaction type) can carry on their affairs for months. On the other hand

some patients are economically incapacitated by phobias or hysterical reactions. In short the "part" or "whole" distinction, though true broadly speaking, is a differentiation based on degree of incapacity, on the experience that most psychoses lead to hospitalization and most neuroses do not. But the organism is a unit and a disease of any part affects the total function.

What the argument seems to boil down to finally is the following: The province of psychiatry lies in a group of disorders with predominantly psychological symptomatology. Those that are mild and can be treated in the home and office are usually called "neuroses" and those that are severe and lead to commitment are usually called "psychoses." This is not a medical, it is an administrative distinction. It has no scientific value and it leads to many misconceptions. For example, one frequently hears of a "neurotic" patient, with anxiety and hypochondriasis, "becoming schizophrenic" and being sent to a mental hospital. Likewise one often sees patients who have "neurotic fatigability and asthenia" becoming depressed and suicidal. In all probability one sort of psychiatric reaction does not change into another. It is much more likely that incipient schizophrenia and the mild depression were wrongly diagnosed. Who has not made such mistakes in diagnosis? The fact is that at present there is no accurate means of early differentiation in mild cases.

One is brought back to the realization that psychiatry is still largely a descriptive and clinical science. Little about etiology is known. When it is known one can make a logical classification that will be of real help in therapy. In the meantime our diagnosis must be descriptive and tentative. Especially to be avoided are unjustifiable generalizations that lead to such unscientific dichotomies as "neurosis vs. psychosis," "functional vs. organic," or "psychic vs. somatic."

There is no doubt that most of us will go on using the terms neurosis and psychosis. They are convenient to designate large groups of patients—those that a psychiatrist sees in the office as opposed to those committed to a mental hospital. There is no harm in using the terms administratively unless we fool ourselves into believing that they have etiological meaning.

When a patient has to be committed one may say "he became psychotic" on such and such a day. Nothing is more certain than that the patient had been sick a long time before he "became psychotic" and that all that long time he was suffering from the same disease. What is meant by "he became psychotic" is that society became alarmed at his behavior and insisted on his being hospitalized. Once more it is obvious that the distinction is legal, not medical or scientific.

S. C.

TRAINING IN PSYCHIATRY

A WORD FROM THE PRESIDENT

Dr. R. A. Chittick, Superintendent of the Vermont State Hospital, has called my attention to the fact that in my last President's Letter discussing training in psychiatry, I made no mention of the state hospitals, although I had suggested that men who could not obtain suitable residencies might secure training in neurology while awaiting an approved residency in psychiatry. I am pleased that he called my attention to this omission and would like to emphasize that there are many positions available in state hospitals throughout the country where doctors can secure further experience in

psychiatry even if they are not approved as training centers.

It should also be pointed out that two years work in psychiatry in such a state hospital can be counted toward two of the five years of required training even if the state hospital is not approved for training. It would seem then that many doctors who wish to go on into psychiatry might secure temporary appointments in state hospitals while waiting for an appointment in a hospital that is approved for resident training.

KARL M. BOWMAN.

MEDICAL SERVICES FOR VETERANS

The official endorsement by The American Psychiatric Association of the policies being followed by the Veterans' Administration under the leadership of General Omar Bradley, merits the attention and active support of every psychiatrist. To insure the best possible medical care for veterans, the profession must stand as a buffer between the Veterans' Administration, and political influences which may endanger the execution of their policies.

In the question of whether the Veterans' Administration is to be governed by the needs of veterans, or by political groups, the impracticality of the latter has been amply illustrated in former years. The many small veterans' hospitals, located in inaccessible places to which suitable medical and nursing personnel cannot be attached, and which are largely removed from the possibility of consultation with the most progressive medical centers, are mute evidence today of the folly of basing the provision of medical services on references from chambers of commerce and political pressure groups.

The new policy being followed by General Bradley and his Surgeon-General, Major General Paul R. Hawley, of giving first consideration to the veterans' medical needs is, of course, as it should be. As medical men interested in fostering the finest medical service, we should herald with great enthusiasm the setting up of deans' committees in centers to provide consultative service to the veterans' hospitals; the new salary scales which are designed to attract the best full-time physicians, as well as consultants; the development and improvement of out-patient service; and praises be, we should most certainly applaud the change that attaches the

name "hospital" instead of "facility" to veterans' institutions. It is our shining hope now that the step following the change in name will be the appointment of medical superintendents instead of lay "managers," a change which is strongly advocated by Major General Hawley.

General Bradley and General Hawley have been most cooperative with The American Psychiatric Association in effecting plans to care for psychiatric patients, and have consulted with the outstanding psychiatrists in the country in appointing Captain Daniel Blain as head of neuropsychiatric work in the Veterans' Administration. All of the Association's specific recommendations to improve the care of psychiatric patients have been satisfactorily backed by General Bradley and General Hawley.

It seems obvious that the Veterans' Administration is headed toward a practical, high-type of medical service program, and anything we can do to give them cooperation or support in these days of their reorganization will do much to keep political interference out of medical matters. This is not the job of the officers of the Association. It is the job of the entire membership.

Let us not sit idly by, allowing those men who are fighting the battles for the best in medical care for the veterans to be attacked for political or personal reasons, without raising our voices in vigorous protest. Every member who professes to stand for the best in care should find ways and means of doing his bit to back these men, just as long as they continue their present policy of putting the best medical care of the veteran above all else.

C. C. BURLINGAME.

SYMPOSIUM ON RELATIONS OF LAW AND MEDICINE

In 1943 this JOURNAL participated in a national symposium dealing with "Scientific Proof and Relations of Law and Medicine," the purpose of which was to promote closer association and better understanding between the two professions. The symposium consisted of a series of studies of subjects having both medical and legal aspects, and which

were published simultaneously in both law reviews and medical journals. The general editor of the symposium was Hubert Winston Smith, research associate on the faculties of law and medicine at Harvard University.

This year Dr. Smith, who is now professor of legal medicine and affiliated with the College of Law and with the College of

Medicine at the University of Illinois, has arranged a second symposium of fifty or more studies prepared by legal and medical authorities on problems of joint interest to the two professions. These papers will be published by the participating medical and legal journals during the spring and summer of 1946.

A contribution in this series, "The Physician and the Federal Narcotic Law," by H. J. Anslinger, Commissioner of Narcotics, Treasury Department, Washington, D. C., appears in this issue of the JOURNAL. In

the next number will be published a further contribution to the symposium by Weihofen and Overholser on "Commitment of the Mentally Ill."

Readers wishing to procure a master index containing citations to the studies published in both the first and second series of "Scientific Proof and Relations of Law and Medicine" may do so by sending twenty cents in stamps to Professor Smith, College of Law, University of Illinois, Urbana, Ill. Copies so reserved will be mailed between May 15 and June 1.

NEWS AND NOTES

PENNSYLVANIA PSYCHIATRIC SOCIETY.—At the seventh annual meeting which was held October 4, 1945, the following officers were elected for the year 1945-1946.

OFFICERS

Kenneth E. Appel, M.D., President. Philadelphia
Charles H. Henninger, M.D., President-ElectPittsburgh
Philip Q. Roche, M.D., Secretary-TreasurerPhiladelphia

COUNCILLORS

FOR ONE YEAR

Frederick H. Allen, M.D. Philadelphia
Roy W. Goshorn, M.D. Hollidaysburg
Harry M. Little, M.D. Pittsburgh
George W. Smeltz, M.D. Pittsburgh

FOR TWO YEARS

LeRoy M. A. Maeder, M.D. Philadelphia
Thomas A. Rutherford, M.D. Waymart
Cornelius C. Wholey, M.D. Pittsburgh

AUDITORS

FOR ONE YEAR

Robert S. Bookhammer, M.D. Philadelphia

FOR TWO YEARS

Harry F. Hoffman, M.D. Allentown

FOR THREE YEARS

Robert J. Phifer, M.D. Woodville

SCIENCE FOR DEMOCRACY.—“If we are to have a national science program, we need a balanced all-science program, with the primacy lodged where it belongs, in the social sciences. If science is to make real sense in relation to human life, the natural and the social sciences must reinforce each other in a genuine partnership, for the natural sciences can function fully only as society is effectively organized. And both would be the gainers, in this partnership, for the natural sciences need to be humanized, the social sciences to improve their technical rigor. . . .

“In any national science program worthy of the name, the social sciences must be

planted at the core of scientific effort, and especially at the core of government, which is their laboratory and testing ground. They must be planted there at the start, not at some hypothetical future time.”—*Ward Shepard*, Soil Conservationist, U. S. Department of Interior, Washington, D. C., in *Science*, January 18, 1946.

DR. JOSEPH E. BARRETT APPOINTED COMMISSIONER.—Dr. Joseph E. Barrett, since 1943 superintendent of the Eastern State Hospital at Williamsburg, Va., was appointed on January 22, 1946, Commissioner of Mental Health and Hospitals for the Commonwealth of Virginia succeeding the late Dr. Hugh C. Henry. A native of Arkansas, Dr. Barrett served in the state hospital of his home state from 1923 to 1928, then entering the Massachusetts state service. He progressed rapidly, becoming Assistant Commissioner of Mental Diseases in 1934, and in 1937 was appointed Director of the Michigan State Hospital Commission. When in 1939 the political climate of Michigan became unsalubrious, Dr. Barrett became associated with the Virginia state service. There his abilities as a progressive and resourceful administrator have been recognized, this recognition now culminating in his present appointment.

The JOURNAL extends congratulations to Dr. Barrett and to the Commonwealth of Virginia.

AMERICAN SOCIETY FOR RESEARCH IN PSYCHOSOMATIC PROBLEMS.—The annual meeting of the Society will be held at the Hotel Pennsylvania, New York City, May 11-12, 1946. The morning session, May 11, will be devoted to “Contributions of Military Medicine to Psychosomatic Medicine.” The afternoon topic will be “Psychosomatic Aspects of Orthopedic Practice.” At the annual dinner “New Advances in Psychosomatic Investigative Techniques” (An Illustrated Parody) will be presented by Bertram D. Lewin, M. D.

On May 12, submitted papers will be read. Roy G. Hoskins, M. D., is chairman of the program committee.

Because of space limitation, reservations should be made at least 2 weeks prior to meeting. Registration fee for non-members is \$5.00 for two days; \$3.00 for one. The charge for the Annual Dinner is \$5.00. Limited hotel reservations are available.

SINAI HOSPITAL OF BALTIMORE.—Announcement has been made of the establishment of the Alfred Ullman Laboratory for Neuro-Psychiatric Research at the Sinai Hospital of Baltimore. The work in the laboratory will be carried out under the direction of Dr. H. S. Rubinstein.

CALIFORNIA STATE HOSPITAL HEADS APPOINTED.—Director of Institutions Dora Shaw Heffner has announced the appointment of new superintendents for Stockton and Norwalk State hospitals.

The new appointees are Dr. R. B. Toller at Stockton, succeeding Dr. Margaret H. Smyth, and Dr. M. J. Rowe at Norwalk, succeeding Dr. Edwin Wayte. The changes were effective as of March 1, 1946, on which date Dr. Smyth and Dr. Wayte were retired.

REFRESHER COURSE IN PSYCHIATRY AND NEUROLOGY, BELLEVUE HOSPITAL.—Beginning September 17, 1946, an 8 week full-time refresher course in psychiatry and neurology, will be given for physicians at the New York University College of Medicine, Bellevue Hospital Psychiatric Division, New York City. Instruction will be given by the staffs of the psychiatric and neurologic departments of the medical college—with the assistance of staff members from other divisions of the medical school. The subjects covered will include clinical psychiatry, clinical neurology, functional and organic psychoses, psychoneuroses, psychopathology, therapy, psychosomatic problems, neuroanatomy, neurophysiology, neuropathology, X-ray diagnosis, electroencephalography and other related subjects.

Registration is open to graduates of approved grade A medical schools who have completed an approved internship in medicine. Preference will be given to applicants

who have had previous approved psychiatric training, and to those who are preparing for examination of the American Board of Psychiatry and Neurology.

Early application on an approved form for registration is recommended because of the limited enrollment which can be accommodated. Tuition fee, \$250.00.

Additional information may be obtained from Dr. S. Bernard Wortis, Professor of Psychiatry, New York University College of Medicine, 477 First Avenue, New York City 16, N. Y.

ILLINOIS PLACEMENT SERVICE.—In order to help the various agencies make contact with psychiatrists coming from the services, as well as others, a Psychiatric Personnel Placement Service has been organized by the Illinois Society for Mental Hygiene in its offices at 343 So. Dearborn Street, Chicago.

A complete roster of opportunities for employment, education, and fellowships in Illinois will be set up for the convenience of the applicants. Gathering these data in one place makes it unnecessary for applicants to shop around to learn what opportunities are open.

The program was started in response to many inquiries made by individuals and agencies regarding opportunities and personnel. Inquiries may be addressed to Dr. Rudolph G. Novick at the Chicago office of the Society.

THE AMERICAN NEUROLOGICAL ASSOCIATION.—The 71st Annual Meeting of the American Neurological Association will be held June 26-28, 1946, in San Francisco, California, at the Fairmont Hotel. (Reservation cards will be sent to members later.)

The scientific sessions will be held on Wednesday afternoon, June 26, at 2.30, and on Thursday and Friday morning and afternoon at 9.00 and 2.30. There will be no symposium. The annual dinner will be held on Friday evening, June 28, at 7.00.

The American Association of Neuropathologists will probably meet at the same headquarters on the morning of June 26.

The President, Dr. Schaller, will arrange for the entertainment at the Bohemian Grove

over the week-end immediately following the meeting, of any members and their families who would like to have the opportunity for this unique camping experience. Trips to points of interest in the vicinity of San Francisco will also be available.

JOBS AND THE MAN.—A publication by the National Committee for Mental Hygiene is termed a guide for employers, supervisors, interviewers, counselors, foremen and shop stewards in understanding and dealing with workers, civilians or veterans. This pamphlet is based on extensive clinical experience and upon consultation with many employers, personnel directors and veterans' coordinators. It deals with the readjustment of veterans to civilian living, placing men in the right kind of jobs and treating them helpfully at their work, practical techniques in industrial interviewing and counseling, understanding service men who come back nervous, and steps towards better industrial mental health and human relations. The authors of this publication are Luther E. Woodward, Ph.D., and Thomas A. C. Rennie, M. D.

CLEVELAND WELFARE FEDERATION.—“Mental Health for Everyone” was the general topic of four sessions at the fourth annual health and welfare institute of the Welfare Federation of Cleveland. The topics included a definition of mental health in layman's language; what the war has taught us about mental health; mental health in the schools; and what our legislators say. Other principal subjects were employment; human aspects of the housing needs; and is the American family disintegrating? Seventy-five community organizations served as co-sponsors with the Welfare Federation.

ANNUAL MEETING, NATIONAL COMMITTEE FOR MENTAL HYGIENE.—The thirty-sixth annual meeting of the National Committee for Mental Hygiene was held at the Hotel Waldorf-Astoria, New York City, November 1 and 2, 1945, with more than 1000 persons in attendance.

At the opening session, with Dr. S. Bernard Wortis presiding, a symposium on “Prejudice” was presented. This was followed by the annual luncheon meeting at

which Mr. Eugene Meyer, editor of the *Washington Post* and president of the National Committee for Mental Hygiene, presided. At this time the medical director of the National Committee, Dr. George S. Stevenson, presented his annual report. The guest speaker was General Omar N. Bradley, Administrator of Veterans Affairs, whose address was titled “Protecting the Health of the Veteran”. (This address was published in the January 1946 number of *Mental Hygiene*.)

At the luncheon meeting General Bradley also presented the Lasker Award in Mental Hygiene, which this year was divided between two outstanding leaders in the field of rehabilitation—Dr. John Rawlings Rees, formerly Consultant in Psychiatry in the British Army, with the rank of brigadier; and Major General G. Brock Chisholm, Deputy Minister of National Health, Ottawa, Canada.

At the afternoon session several papers were offered dealing with new technical developments in psychiatry and mental hygiene, with Dr. Frank Fremont-Smith, Medical Director of the Josiah Macy, Jr. Foundation, acting as chairman.

Dr. Ellen C. Potter of the New Jersey Department of Institutions and Agencies presided at the morning session of the second day. Several papers were read dealing with “Federal Mental Hygiene Activities”. Dr. Samuel W. Hamilton presided at the luncheon which followed at which Dr. Chisholm spoke on “World Peace and Mental Health”. At the luncheon meeting *The Modern Hospital* prizes for the three best essays on the topic, “A Plan for Improving Hospital Treatment of Psychiatric Patients” were presented by Dr. Robert N. Felix. The first prize, \$500, went to Lieutenant L. L. Hasenbush, Medical Corps, U.S.N.R.; the second prize, \$350, to Gerald Victor Haigh of the Norwich State Hospital; the third prize, \$150, to Captain K. R. Eissler of Fort Jackson, S. C.

The final session was devoted to contributions on the general subject of the *Modern Hospital* competition. The speakers were Dr. Daniel Blain, Dr. Nolan D. C. Lewis, Dr. Luther E. Woodward and Dr. Thomas A. C. Rennie.

NORTH CAROLINA APPOINTMENTS.—Dr. Louis Girardeau Beall, for the past several months acting superintendent of the state hospital at Morgantown, has been appointed superintendent of that institution by the State Hospital Board.

Dr. Robert Guy Blackwelder has been appointed superintendent of the state hospital at Raleigh, after having served for several months as acting superintendent.

WESTBROOK SANATORIUM.—Dr. J. K. Hall, medical superintendent of Westbrook Sanatorium, Richmond, Va., reports the addition to his staff of Dr. Thomas Edgar Painter, after four years' service in the medical Corps of the United States Army.

NORWICH STATE HOSPITAL.—Dr. Riley H. Guthrie, previously first assistant physician at St. Elizabeths Hospital and recently appointed superintendent of the Norwich (Conn.) State Hospital, brings to that post a rich and varied professional experience. Formerly assistant to the commissioner in the Massachusetts Department of Mental Disease, he also served for several years as chief executive officer of the Boston Psychopathic Hospital. Earlier as assistant superintendent of the Monson (Mass.) State Hospital he had done extensive research work on epilepsy.

In strengthening his staff at the Norwich State Hospital, Dr. Guthrie announces the appointment of Dr. Emerick Friedman as clinical director. Dr. Friedman, a member of the staff since 1940, has lately returned to the hospital after three years' service in the Medical Corps of the United States Army, attached to the Air Force. He was discharged from the Medical Corps with the rank of major.

MANUSCRIPTS INVITED FOR NORTON MEDICAL AWARD.—The book publishing firm of W. W. Norton & Company announce that they are again inviting manuscripts for submission to be considered for the Norton Medical Award of \$3,500 offered to encourage the writing of books on medicine and the medical profession for the layman. The first such award was made to THE DOCTOR'S JOB, Dr. Carl Binger's book, published last

spring, which gave the doctor's point of view on his work. Announcement will be made shortly of the winning book for 1946. Closing date for submission of manuscripts this year is November 1, 1946, the winning manuscript to be published in 1947. All particulars relating to requirements and terms may be had by addressing W. W. Norton & Company Inc., 70 Fifth Avenue, New York 11, N. Y.

AWARDS FOR RESEARCH ON PROFESSIONAL PROBLEMS OF WOMEN.—Pi Lambda Theta, National Association for Women in Education, announces two awards of \$400 each, to be granted on or before August 15, 1946, for significant research studies in education. An unpublished study may be submitted on any aspect of the professional problems and contributions of women, *either in education or in some other field*. Among others, studies of women's status, professional training, responsibilities and contributions to education and to society, both in this country and abroad, will be acceptable.

Three copies of the final report of the completed research study shall be submitted to the Committee on Studies and Awards by July 1, 1946. Further information may be obtained from Miss Bess Goodykoontz, chairman of the Committee on Studies and Awards, U. S. Office of Education, Washington, 25, D. C.

Last year three awards of \$300 each were granted to: Miss M. Gladys Scott for *Survey of Vocational and Professional Plans and Interests of High School Girls and College Women*; Josephine J. Williams for *Lay Attitudes Toward Women Physicians*; and Mary Lichliter for *Social Obligations and Restrictions Placed upon Women Teachers*.

AMERICAN GROUP THERAPY ASSOCIATION CONFERENCE.—The third annual conference of the American Group Therapy Association was held in January 1946 at the Commodore Hotel, New York City. The general topic of the conference was "Clinical Applications of Group Psychotherapy."

Papers were read dealing with treatment methods and results in various types of psychiatric disorders. There were also three round tables to complete the program.

S. R. Slavson, president of the Association, occupied the chair.

RORSCHACH COURSE, MICHAEL REESE HOSPITAL.—The division of neuropsychiatry, Michael Reese Hospital, announces its 1946 course in the Rorschach test to be conducted June 3-7, inclusive, by S. J. Beck,

Ph.D. The teaching this year will focus especially on the more severe neurotic conditions. The Rorschach test records to be demonstrated will therefore be those derived from patients in acute conflict, including veterans of the war. For information write to the Secretary, Division of Neuropsychiatry, Michael Reese Hospital, 29th Street and Ellis Avenue, Chicago 16.

BOOK REVIEWS

MENTAL DISORDERS IN LATER LIFE. Edited by Oscar J. Kaplan. (California: Stanford University Press; London: Humphrey Milford: Oxford University Press, 1945.)

Statistics indicate and indeed our own ordinary observations leave no doubt of it, that the population is ageing. In Cicero's time life expectancy for the average Roman was 23 years. When Shakespeare lived it was approximately 37 and with us it is approximately 65. The factors contributing to this startling change need not be mentioned now. They are of course important but their results are more important. There are far reaching implications in practically every aspect of life.

What all this means for the practice of Medicine is of course of great interest to physicians. Not many years ago Pediatrics appeared as a Medicine specialty and its devotees have had considerable to do with the altered human picture. Almost suddenly physicians have come to realize that the average of the population is increasing, people are living longer and in this lengthened span new medical problems are appearing. Those who now live longer desire happiness, the opportunity to serve and freedom from suffering just as their forebears ten to twenty years younger did. It is plainly evident that the relaxation of medical effort that seemed to come when the patient passed the fifty or at most the sixty mark will no longer do.

Old age, its physiology, psychology, biochemistry and pathology are the objects of new interest and investigation. A slowly increasing current of articles dealing with these things has made its appearance in medical literature. Several texts devoted to the medical problems of the aged have been published. Through these media the members of the profession are being attracted to and interested in these particular problems.

Now there appears what the present reviewer believes to be the first text devoted entirely to the mental disorder of later life. It is of the nature of an expanded symposium. The Editor, Oscar Kaplan, himself a psychologist, has associated with him eleven physicians, four who are psychologists, physiologists or sociologists and one statistician. The result is a volume in which the subject is illuminated, one would say, from all relevant angles. Let no one assume that the book is simply a compilation of material already dealt with in books published previously. It is of course true, as everyone would anticipate, that some of the matter included could be found scattered here and there in other texts. Here whatever is repetition is gathered into one book and along with it is a great amount of new information. The present reviewer must admit that he was greatly surprised by such evidences of already reported investigation into the problems of later life as are here presented.

While the various contributors may each be supposed to have his special interest, the viewpoints expressed are not narrowly specialized. They are broad and inclusive. The sociological and economic aspects are mentioned and dealt with, forming no small part of the general program. There is, in fact, a whole chapter devoted to the Sociological Aspects of Mental Disorder in later life. One cannot help agreeing that we need such cultural reorganization of family and economic institutions as will provide both physical and emotional security in the old age period and an educational process such as will mold personalities in such a way as to fit them for successful adjustment in a world likely to be vastly different from that known to either our fathers or ourselves.

Dr. Bowman's introduction puts the whole problem well before the reader. His statements are on the whole general as indeed they should be. Dr. Pollock's statistical survey which appropriately follows provides the detailed evidence that in so far as mental institutions are concerned there is no doubt of the increasing incidence of mental disorders in later life. This does not mean that a larger proportion of the people who reach later life are developing psychoses requiring institutional care but that a larger number of people are living long enough to enter what is obviously a vulnerable period.

The surveys of physiological and psychological aspects of later life and the mental disorders that occur during it are particularly interesting. The amount of available data is surprisingly large but the fact that it has been published in so many different journals, etc., makes the present reviews especially valuable. In so far as physiology is concerned the important fact seems to be that while homeostatic capacities are well maintained even in old age, reserve capacities are so persistently utilized that "extremes of physiological displacement" are met more slowly than in the young. The fundamental difficulty may be supposed to be due to "interference with transference of essential substance to the cell or inadequacies in the enzyme system."

The psychological aspects of the problem receive satisfying treatment—no facet that is of importance or interest having been overlooked. Here again one notes the evidences of the many investigations that have already been made.

Disorders of nutrition are evident enough in later life. Not all result in mental abnormality but there are acute and subacute confusional states in old age that do not correspond clinically with those recognizably due to cerebral arteriosclerosis and senile dementia. Since many such cases are reversible Wexberg and later in the book, Robinson postulate toxic or deficiency states as ultimately responsible. Such cases warrant considerably closer study than they have heretofore received.

A very important chapter deals with the neuroses of late maturity. Such conditions are in reality much more commonly met with than deteriorative psychoses and yet little mention is made of them in psychiatric texts and all too often there is a tendency to consider them as "signs of inevitable decay" and to adopt a fatalistic attitude toward them. The author of the chapter is at much pains to correct this tendency and the reader is rewarded with a really fine contribution.

The involutions states with and without psychoses, the presenile dementias and senile and arteriosclerotic states, especially the latter, are well presented.

An account of a survey of long hospitalized patients is unique and interesting, and conclusions reached that with no question of restoration in mind, much can be done to further the adjustment of such patients to their hospital existence. Individual appraisal and care yields improved results here as elsewhere in psychiatry. The editor himself deals with the aged subnormal. The elderly, facing an even increased need for emotional adjustment, develop as others do the somatic reverberations of conflict, anxiety and insecurity; but there are special opportunities for the development of emotional reactions in the physical disabilities and deficiency associated with and incident to the process of ageing. Such things as the general decline in speed and endurance, the climacteric, male or female, the disturbances in the circulatory system, especially as it affects the myocardium and cerebrum, the diminishing efficiency of the auditory apparatus, all contribute special items to and influences in the psychosomatic ailments of those in later life. Brief but well selected case histories greatly assist the author of this particular section in elucidating the subject.

The chapters on Psychotherapy and Mental Hygiene are not mere restatements of the rather vague shopworn dicta and shibboleths often found in books. They are honest attempts to be specific and helpful in the problems under attention.

In addition to being a very good delineation of the mental disorders of later life, their genesis, phenomena and treatment, the book continually draws attention to the problems posed by the increasing proportion of elderly people in the social life of the world. Only when we know more of the biology, pathology and sociology of ageing mankind shall we be able to claim some knowledge of the full capacities of man.

Bibliographies, some fine reproductions of histological changes in senility and cerebral arteriosclerosis and a good index complete a book that is timely and will be of interest and value to all physicians.

A. T. M.

EMOTIONAL FACTORS IN LEARNING. By *Lois Murphy* and *Henry Ladd*. (New York: Columbia University Press, 1944.)

This is a book written apparently for teachers to put over, or expand, the idea that good teaching can be therapeutic. Mrs. Murphy (her collaborator,

the late Henry Ladd, did the case studies for the book rather than any synthesizing of the material) has chosen to develop her central theme by discussing first theoretically the various emotional factors in learning, placing great emphasis on the individual experience, make-up, and maturity of each student. She writes facetly, if somewhat discursively, interlarding her generous and idealistic concepts with many illustrative passages. It is pleasant, optimistic reading giving one the happy feeling that with proper coördination, a closely knit, mature faculty in a very flexible setting really can provide a significant growth experience for an individual college-age student.

The second half of the book is devoted to excellent case histories. These histories are particularly interesting since they are the story of a student as she develops from the teachers' point of view. Accessory people enter in, the Rorschach tester and the psychiatric adviser, but essentially the method of reporting is that of organizing and summarizing teachers' observations of the student to point up how a faculty can utilize and channelize 'emotional factors.'

This book is written by Sarah Lawrence faculty about what happens at Sarah Lawrence College, a small, select, wealthy school where an unusual number of facilities are available for each student. This fact does not invalidate the basic ideas expressed, but it does mitigate somewhat their direct applicability to general college situations. Although the average teacher may feel frustrated after reading this book, it is worth his perusal, not only to expand his potential teaching horizon, but to give him a point of view for dealing constructively with those students whose 'emotional factors' draw his attention to them as individuals even in a school where enormous classes are the rule and faculty coördination per student impossible.

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NAVAHO WITCHCRAFT. By *Clyde Kluckhohn*. Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University. Vol. XXII, No. 2, 1944.

Dr. Kluckhohn's *Navaho Witchcraft* is a welcome addition to the growing literature concerning witchcraft belief and practice. A specialist's manual on such activity among the Navaho, this monograph should receive a warm reception from psychiatrists as well as ethnologists.

Divided into three sections this volume is weighed heavily in the direction of methodology. Recognizing the growing interest in witchcraft from the social, psychological and psychoanalytic point of view, Kluckhohn attempts to avoid the oversimplifications which have in the past disturbed and even antagonized many who have not fully accepted analytic technique. In Part I he critically analyzes his data in a manner which enables the reader to gain some insight into the difficulties of field work in "forbidden" areas of social practice.

His definitions and formal descriptions provide yardsticks for further comparative study.

In Part II Kluckhohn turns to interpretation of these data. In his own words: "We have seen what the facts are. Now—what do they mean? "Meaning" in science, consists primarily in showing that one fact bears not a haphazard but a determinate relationship to another fact or set of facts. Are there any uniform modes of relationship between the data bearing on Navaho witchcraft and the data on Navaho history; between witchcraft beliefs and practices and Navaho social organization, Navaho economy, Navaho value systems?"

From Navaho history Kluckhohn finds that there are periods which witchcraft changes and/or practice flared dramatically. This knowledge ties in with his discussion of anxiety and witchcraft. Probably the outstanding contribution which *Navaho Witchcraft* makes lies in Kluckhohn's careful use of some of the newer concepts in the culture and personality" field.

His discussion of *manifest* and *latent* function, *alpha* and *beta* press in connection with witchcraft practice serve well to implement his conclusions that while analytic technique and emphasis on the individual may reward us with interesting and even valuable hypothesis, the analysis of the development of personality and the study of the press of social events may in the long run provide us with greater insight.

The blind section of the monograph is a set of well chosen appendices which seem well to document the broad generalizations presented in Part II.

All in all, this is a good piece of work. Designed to discuss the particular manifestations of Navaho practice in order to shed light on more general problems of techniques of adjustment, Kluckhohn succeeds in clarifying a heretofore rather clouded issue and leaves the way open for considerable more work in this area.

Part II, the "meat" of the monograph, is easy and, at times, exciting reading. Parts I and III lack the continuity necessary for nontechnical interest. I believe that Kluckhohn's conclusions are valuable and make an interesting comparison to Fromm's *Escape from Freedom*. "Free will," "predestination," and witchcraft under this type of analysis may have much more in common functionally than we have been eager to admit before.

R. L. BIRDWHISTELL, M. A.,
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FOSTER HOME CARE FOR MENTAL PATIENTS. By Hester B. Crutcher. (New York: The Commonwealth Fund, 1944.)

This excellent 199 page book is an outstanding contribution to the care and treatment of the mentally ill.

Chapter I "Family Care; Its Meaning and Values" discusses the advantages that may accrue to the patient when placed with foster families. "If family care had no values other than the satisfaction it gives to patients, it would have demonstrated its worth. It has given opportunities for growth and development in normal living to people

long isolates and restrained because they have, for the most part, been dismissed or forgotten by a frightened or incensed public." Likewise there are advantages to the hospital in that space is made available for the acutely ill and for those requiring specialized treatment.

Administration costs and results of family care are set forth in Chapter II. The author stresses the importance of special legislation and the allocation of special funding by the state authorities. The costs vary according to the amounts paid for board in different localities and social service supervision afforded. Data are presented to indicate that the total cost of family care is cheaper than hospital care.

In Chapter III, it is shown that there are two groups for whom family care may be desirable—the continuous treatment type of patient and those wherein family care is used as a treatment measure to bring about expected permanent and total rehabilitation. This latter type is more expensive because of the necessity for social case work.

Selection of patients and selection of homes are discussed in the next two chapters. The author indicates that no patient with tendencies toward assaultiveness or self-destruction can be considered for family care; rural districts or semi-industrial communities preferably accessible to the hospital offer the best location. Methods of selecting patients for placement and the criteria for home selection are set forth.

In Chapter VI, "The Supervision of the Patient," there is pointed out the significant rôle played by the social worker in foster home care of mental patients entailing as it does an interpretation of the project to a community, the selection and evaluation of suitable homes, the imparting to the "care-taker" of an understanding of the patient, a knowledge of the patient's history before and during his hospital residence; and careful supervision after placement to assist in his adjustment through an interpretation of behavior and the instilling of encouragement and assurance.

Two methods of organizing family care—the Colony System and the District System—and the advantages of each are set forth in Chapter VII.

One entire chapter is devoted to case histories; and this is followed by an outline of suggested forms and procedures.

The Appendix describes programs and costs now effective in the United States. There also appears an extensive bibliography.

This contribution to psychiatry, covering the field as extensively and authoritatively as it does, should lead the way toward a new era in the care and treatment of our mentally ill and mentally defective; and, as Dr. Arthur Ruggles so aptly states in the Foreword, "institutions for the mentally ill may well use this volume as a handbook and guide for family care procedures and if we heed well all the lessons it can teach us we shall be equipped to make a distinct contribution to public education, financial conservation and human welfare."

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Mental Hygiene (Canada).

BORDERLANDS OF PSYCHIATRY. By *Stanley Cobb, M.D.* (Cambridge: Harvard University Press, 1944.)

The reviewer has used this valuable book to explore and illustrate the areas of psychiatry. Dr. Cobb's borderland includes the neurotic, the alcoholic, the epileptic and patients with some central nervous system damage, and the stammerers. Every rough estimate Dr. Cobb makes is full of interest and brings a certain definiteness into what has been vagueness. He does not take the reader to a borderland outside of his borderland where there are people with prejudice and amounts of anxiety which handicap them but do not entitle them to a disease.

The reader will find attractive discussions of the rôle of the hypothalamus and psychosomatics. In the chapter on psychoneuroses the medical reader will find some traces of direction toward the lay audiences of the Lowell Lectures. Neurosis diagrammed by one human nervous system facing another (inter-personal relationship) is a novelty. Like the rest of the book, the chapter on neuroses is tolerant, stimulating, original.

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THE HOPÍ WAY. By *Laura Thompson and Alice Joseph.* (The University of Chicago Press, 1944.)

This small volume forms an important addition to our already considerable literature on the Hopi Indians of northern Arizona. In 1540 Coronado found the Hopi living in the same semi-arid mesa country which they now occupy and from that time they have been in ever-increasing contact with various bearers of European culture. Despite this contact, much of Hopi life has remained intact and the Hopi today are among the few American Indian groups which lead recognizably distinct, non-European lives. It is for this reason that the Hopi have furnished a fruitful source of investigation and observation to both anthropologists and psychologists for a number of years.

The present book is a combination of these two disciplines under the joint authorship of Laura Thompson, an anthropologist and Alice Joseph, a psychiatrist. It is the first in a series to be published as the result of a three years' collaboration between the Indian Service and the Committee on Human Development of the University of Chicago. John Collier, former Commissioner of Indian Affairs, has written the foreword and the book gains interest in the light of a newly organized agency, the Institute of Ethnic Affairs, Inc., of which John Collier is president and on whose Board of Directors Laura Thompson's name appears. According to a pamphlet distributed from Washington, D. C., this Institute was created to develop "action-in-research" which "endeavors to bring to bear, and to bring within the scope of the lay citizen, all that science can discover and predict, concerning ethnic tensions, maladjustments, conflicts, or

neglected group opportunities." There is little doubt that some of the principles thus described have been employed in this volume and that the methods used here will receive a fairly wide distribution. The method of research presented in *The Hopi Way*, therefore, deserves more consideration than might otherwise be given it.

Approximately one-half of the book is given over to an ethnographic description of Hopi life, which includes an extended account of the life cycle. There are few successful short descriptive ethnologies of this type in anthropological literature. Ethnological data as full as that which exist for the Hopi cover thousands of pages and it is difficult to reduce such copious and detailed material into a small space. Attempts in this direction are often correspondingly weak. Although persons thoroughly conversant with the Hopi literature will find errors in fact or in emphasis in this account, Miss Thompson is to be congratulated upon the authenticity of the picture of Hopi she furnishes in a few pages, particularly upon her intelligent use of historical materials.

After presenting eleven case histories of Hopi children, the remainder of the book is devoted to ten short chapters dealing with such subjects as the "Use of Tests as Tools," "Health, Food and Sickness," "The High Hopi I. Q.," "What Lies Below the Surface," "Hopi Hostility," etc. These short treatments by Alice Joseph are designed to cover the mental and emotional equipment with which the Hopi meet life and the stresses and strains which occur in the cultural setting as it exists at the present time. It does not seem possible to this reviewer to criticize in any way the intention of the scope suggested by such treatment. However, as indicated above, it becomes increasingly necessary, due to the importance of this book as an example of research to be followed in the future, to analyze rather carefully how well it achieves its avowed purpose.

Several statistical tables are appended which, on superficial examination, seem to indicate that the data have been statistically treated. On close examination this is found not to be the case. No full test scores or analyses are included, and the figures which do appear are given in percentages, many of them on a small number of cases. Because of the difficulty involved in getting an adequate sampling, it is not easy to apply statistical methods to small primitive groups. This has long been recognized as one of the stumbling blocks in the path of careful work with non-European peoples. Certain minimum requirements of exactness, however, are quite possible. Yet in the discussion of Hopi I. Q., figures for "white children" are compared with those of Hopi on two tests: the Grace Arthur Point Performance Scale and the Goodenough Draw-a-Man Test. In Table III the Hopi scores are broken down according to the home village of the child, i.e., Oraibi and First Mesa are given separately (p. 101). On page 91 we find that the number of children given the tests varied from 92 Oraibi children (Grace Arthur) to 32 from First Mesa (Draw-a-Man). The table compares Oraibi

and First Mesa with "white children" on whom the Grace Arthur was standardized and with "White school children from an industrial Midwestern town" who took the Draw-a-Man test. In all the other tables in which comparisons are made between Hopi and white children, percentages are given simply for "Hopi" and "Midwest." Wayne Dennis administered Draw-a-Man tests to 152 Hopi children of First and Second Mesas in 1942 and no mention is made of these valuable check scores.¹ Both the number of cases and the test range are consistently omitted. In a paragraph preceding the tables the authors say of their tabular presentation:

In presenting this kind of table, which from our abundant documentary material offers only a few items for illustrative purposes, we wish to point out again that interpretive conclusions are not based on the quantitative results of one test alone, but on the correlation of all test results, together with qualitative and cultural considerations (p. 145).

Although it becomes practically impossible to assess the value of a testing program reported upon in such fashion, this reviewer feels that it is quite within the right of the psychologist to use tests as interpretive tools so long as no misleading pseudo-statistics are suggested. Interpretations are based on other tests than the ones mentioned above, among them a particularly tantalizing set of projective tests including the Rorschach. Here again, the results are given to the reader in the same tabular form, without correlation figures, without accurate recording, but with chapters of interpretive comment. Interpretation is fully justified and insights may be of extreme value. Scientific data cry out for valid interpretation upon which sound social science programs may be based. We need "action-research." It is, therefore, all the more disappointing, after over half a century during which anthropologists have dwelt on the general point of human mental equality and after such elaborate preliminaries, to find this as the concluding paragraph to the discussion of the high Hopi I. Q.:

"From our tests we have the impression that Hopi children on the average are very intelligent, highly observant, show a remarkably balanced mental approach and are apparently very capable of complex and abstract thinking. Mental activity appears even overemphasized to a certain extent, and we shall see later its influence on the balance of the whole personality. We have also the impression that these qualities are closely connected with Hopi culture and the training which the children received at home and through the community. In dealing with the Hopi it would indeed be a grave mistake to adopt the baby-talk and oversimplified methods

which are often used toward half-witted persons and those who go under the collective name of 'natives'" (p. 101).

As indicated above, the book also includes eleven Hopi case histories. Case studies are of such extreme importance in the analysis of emotional and social adjustment that their value can hardly be overemphasized and the need of complete case histories for primitive peoples is very great indeed. In discussing 15-year-old Ellen, the account begins "Ellen belongs to a conservative Hopi household which can be called average with respect to its members' general way of life, their economic conditions and their social position in the village." Further on we read, "The father . . . is the Don Juan of the community, openly talked about, appraised and criticized as such" and "the mother . . . is very sloppy, and her household is considered the least clean in the village" (p. 69). Although one believes he knows what is meant by this apparent contradiction, one wonders if such reporting can yield wholly reliable materials.

The reviewer finds herself in an anomalous position. She is convinced that most of the generalizations in the psychological portions of this book are valid, yet she finds the data and evidence which support them either lacking or inadequate. The insights and comments do add to our knowledge of the Hopi Indians. There is a real feeling for reaching out and making use of clues from all the social science techniques. Yet the generalizations seem not much more elaborate than could have been evolved by any mature anthropologist with control of the literature and a feeling for Hopi life. The psychological tools are used almost entirely for window-gazing. Data are used illustratively but no generalization seems to stem directly from carefully controlled data. The authors have forestalled criticism by closing their accounts thus "a fair, over all evaluation of the method and findings of the research can be made only in the context of its total results, including their practical application to administrative problems, the ultimate goal toward which this study and the forthcoming tribal analyses, are oriented" (p. 133).

Perhaps this is so. Perhaps also a portion of the difficulty lies in the fact that the book is apparently aimed at an audience not clearly defined in the authors' minds. At times both phraseology and treatment are scientific, aimed at an audience of considerable experience and information in the social sciences. At other times the language is that which is normally found only in over-popularized accounts and the thinking is similarly oversimplified: the audience then seems to be a group of wholly untrained laymen, well-meaning but ignorant. It is quite possible, therefore, that criticisms given here belong not so much to the working methods of the authors as to their presentation. Certainly the program promises rich rewards and nothing can detract from the basic importance of the authors' thesis that psychological and cultural phenomena should be studied together.

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¹ This reference is included here since it does not appear in the Thompson-Joseph bibliography: "The Performance of Hopi Children on the Good-enough Draw-a-Man Test," *Journal of Comparative Psychology*, Vol. 34, No. 3, Dec. 1942.

DISEASES OF THE NERVOUS SYSTEM IN INFANCY, CHILDHOOD AND ADOLESCENCE (Second Edition). By *Frank R. Ford, M.D.* (Charles C. Thomas. Springfield, Ill.: 1944.)

This standard book now in its second edition contains eleven hundred pages. Primarily, it is written for pediatricists and not for neurologists since the orientation is entirely pediatric. The result is an encyclopedia of nervous diseases for pediatricists and as such it is a valuable reference work.

Since the author has endeavored, and with success, to include everything that bears on nervous disease from infancy to adulthood there is much described that is only remotely connected with nervous disease. Likewise, as is necessary in a book with such a broad scope, each disease description is concise or even curtailed. The author has compensated for this by appending to each section a short list of references for those who may desire more information. These references on the whole are well chosen and reflect a wide range of reading.

The long introductory section on embryology, anatomy and physiology of the nervous system could not be complete enough to be of great value. One finds even a sketchy survey of Brodman's cerebral architectonics which does not seem to be quite in place. A considerable section is devoted to the epidemic encephalitis of von Economo, a disease which has just about disappeared from our clinics. Of course it may return and if it does this section will not appear so superfluous. One regrets that no mention is made of the virus of poliomyelitis in faeces and sewage. A neurologist is shocked by the statement that in the treatment of epilepsy "bromides . . . probably are as effective as any other medication." That surely is not the experience of most neurologists.

This book is not a text book but as an encyclopedia it fills a definite place. This neurological reviewer expects to have occasion to refer to it not infrequently.

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OUR INNER CONFLICTS. A Constructive Theory of Neurosis. By *Karen H. Horney, M.D.* (New York, W. W. Norton and Company, Inc., 1945.)

Ever since Freud introduced us to psychoanalysis, the field of psychotherapy has been colored and, to a considerable extent more recently, dominated by the principles and tenets arising from the experience of practitioners in that field. Gradually in the course of time, divergences have appeared until at present, with respect to therapy, two main points of emphasis have become manifest. On the one hand, the more orthodox stress the importance of uncovering the deepest layers of the unconscious where it is held there reside the factors which create difficulty for the individual. The less orthodox, on the contrary, attach primary significance to what is actually going on in the patient at the time he is under treatment. Concern is focussed upon what now exists rather than how it happened

to get the way it is. No practitioner of psychoanalysis would admit a blind adherence to one or the other point of view, but it is generally clear where their sympathies lie. Doctor Horney is no exception. She clearly belongs to the ranks of the less orthodox.

This fact must be kept in mind in evaluating her new book. It is a discussion of current unconscious activities and as such must be either accepted or rejected.

To this reviewer whose personal predilections cause him to favor Doctor Horney's position, she does a superlative job of making real much that goes on in the unconscious life. Her description of major trends and efforts at solution are brilliant and always ring of keen clinical observations.

Moreover, she has progressed in her thinking and now furnishes us with some new terms for old concepts, thereby throwing added light upon them. For instance, instead of superego she employs the terms idealized image and despised image, thus centering upon current unconscious attitudes rather than losing the patient in the mists of his earliest parental tieups where he can feel no responsibility for changing. Similarly, she substitutes the term externalization for projection and thereby enlarges the concept of projection to cover not only "the objectifying of personal difficulties" but also the objectifying "to a greater or lesser degree all feelings." Throughout the book, in much the same fashion she brings fresh insights to old ideas.

In short, Doctor Horney shines as a clinician and this book constitutes further and ample proof of that fact. Unfortunately, as a theoretician she does not shine so brightly. Content with absorption in current goings-on and convinced that somehow therapy results from unravelling these conflicts, she fails to establish the legitimacy of her position and leaves herself open to the charge of being superficial. On page 47, at the end of her chapter entitled "The Basic Conflict," she writes "My contention is that the conflict born of incompatible attitudes constitutes the core of neurosis and therefore deserves to be called basic." This definition sidesteps completely the essential nature of the incompatible attitudes as does the entire chapter or, for that matter, the entire book. As a consequence, we are confronted with a book, stimulating to read but leaving one with an uneasy feeling that much has been left unsaid. If she had faced more forthrightly the issue of the origin of these incompatible attitudes, she would have materially strengthened her position.

In the eyes of this reviewer, if she had wished, she could have legitimately avoided any attempt to answer the question of origins by simply saying "I don't know" and by adding that somehow something transpires during the early years which results in the development of these attitudes and the creation of a state of conflict. It would then be possible to say, that, regardless of the source of the original conflicting trends, it is the disentangling of the resulting conflicts which produces relief of symptoms. That is her actual stand and,

as a clinician of many years' experience, she is warranted in assuming it. She believes her results back her up.

The reviewer confesses to a disappointment in the book. Although neither in title nor subtitle did he have the right to expect it, he looked in vain for any enlightenment upon the problem of therapy or why she felt her approach afforded advantages above and beyond those offered by the orthodox attack. Perhaps in her next book she will reveal her thought about the actual therapeutic process. As she intimates but never comes to grips with, it must be more than the mere unravelling of conflicts. We await with interest what she has to say along these lines.

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TEXT BOOK OF NEUROPATHOLOGY, 2nd Edition. By Arthur Weil, M. D. (New York: Grune and Stratton, 1945.)

The second edition of this book, after an interval of 12 years, is welcome. The author has increased the number of illustrations in this new edition and the book is consequently slightly increased in size.

The fundamentals of the subject are admirably described and illustrated. The chapter on Injuries could be enlarged to include, for instance, an adequate account of chronic traumatic subdural hæmatoma. "Berry" aneurysms and the importance of their rupture in the causation of spontaneous subarachnoid hæmorrhage are also omitted.

The tables in the Appendix are very valuable.

The book is well printed on good paper, which enhances the value of the illustrations.

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SEPTEMBER REMEMBER. By Eliot Taintor. (New York: Prentice-Hall, Inc., 1945.)

This book was written by an anonymous author for the lay reader. The unfortunate claim is implied that the fellowship of "Alcoholics Anonymous" has all the answers to basic questions on alcoholism and alcoholics. The information in the book does not do justice to this movement or to the psychiatrist who is only casually mentioned. To quote from the book: "It is a source book of authentic information about 'Alcoholics Anonymous,' 'September Remember' will, I believe, play an active part in rehabilitation." The book is poorly written, unnecessarily common almost to the point of vulgarity. Again to quote: "to them it shows . . . with power and vividness, with wit and lustiness, how alcoholics, who want to stop drinking, can; it shows how alcoholics give each other a helping hand no one else can; not the psychiatrist, not the reformer, not the non-alcoholic lover." Not one alcoholic, questioned by the examiner, had a constructive word to say for this book. True, the author depicts the camaraderie and the amateur social service work of tremendous value; but he confuses the reader in detailing the career of

Joe Wales, who utilizes the activities of Alcoholics Anonymous, the psychiatrist, and a sanitarium. The author solves the conflicts due to the eternal triangle, by having the girl, an A. A., commit suicide. Joe Wales then is brought back to the fold of the patient Alcoholics Anonymous group, after, however, his wife returns to him.

Some of the activity of the Alcoholics Anonymous is depicted in a superficial manner while the serious, cooperative spirit of the group portrayed in its text, "Alcoholics Anonymous," is not revealed.

Unfortunately, the reader will have to turn to other works of the Alcoholics Anonymous group and writings of the psychiatrists as well, to determine the real worth of the Alcoholics Anonymous, which is incontestable.

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THE NAVAHO DOOR. An Introduction to Navaho Life. By Alexander H. Leighton and Dorothea C. Leighton. (Cambridge: Harvard University Press, 1944.)

We Americans usually think of ourselves as being keenly interested in the welfare of other people less fortunate than we are, but oddly enough we have never paid a great deal of attention to the conditions and needs of the most alien race that is living within the borders of our country, the American Indian. This is perhaps due to the fact that they are more or less remote to us. Having been administered to by a governmental commission ever since the days that we were a group of colonies and we have assumed that these commissions as a whole have done a capable piece of work. Unfortunately this is not so, and it wasn't until Mr. John Collier was appointed Commissioner of Indian Affairs by President Roosevelt about 1932 that this agency did very much about giving the Indians a constructive program that would assist them in becoming a self sufficient people. While this program is far from being finished they are gradually learning the benefits of preventive medicine along with soil erosion control and other important economic factors. There is no need to go into the outrageous persecutions they have undergone in the past at the hands of incompetent and unscrupulous Federal Agents and the aggrandizing white pioneer, because that is something that most of us are fully aware of and indifferent to. Most of this indifference can be attributed to the fact that the majority of the books written on the American Indian have been written by sentimentalists who have been overenthusiastic or those who have written from a factual or statistical viewpoint. This book is fortunate in striking a happy medium and to be written in a style that is both pleasant and authoritative. The authors have spent considerable time working with the Navahos in the government hospitals on the Navaho Reservation in Arizona and have done much to promote a better understanding between the Indians and the whites as well as performing their regular medical duties. This has been accomplished,

largely, through their understanding of the importance of the "Medicine Man" as a religious factor and securing his cooperation whenever possible, in dealing with the patient; something that is not always done by those who are working with an alien race. The book represents considerable research, on the part of the Leightons, not only in the fields of medicine and anthropology but

also in the historical, social and economic aspects as well. Mr. John Collier, in his foreword to the book, recommends it to all those who are contemplating entering the Indian Service, but it can also be invaluable to anyone who intends to work with any other primitive people.

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THE AMERICAN JOURNAL OF PSYCHIATRY

ADDICTION: SOME THEORETICAL CONSIDERATIONS AS TO ITS NATURE, CAUSE, PREVENTION AND TREATMENT¹

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I. INTRODUCTION

Addiction is in itself an important phenomenon; an understanding of it also involves many of our concepts concerning human behavior and misbehavior in general. However, discussion and investigation of the problem are hampered by looseness in terminology, misuse of terms and confusion in concepts and hypotheses. It is the aim of this paper, first, to clarify the semantics of the subject and, second, to present hypotheses as to its characteristics. We must remember that a hypothesis is a guess, a tentative statement that events occur "as if" certain formulations were true. Hypotheses are not supported or disproved by argument and dialectic. When a datum is found that conflicts with a hypothesis, the hypothesis must be modified or perhaps discarded.

When necessary, specific references to details of published material will be made; the present discussion, however, is an attempt to go beyond present attitudes with the hope that this will facilitate the acquisition of more basic knowledge, not only of the problems of addiction but also of those of human behavior in general.

2. DEFINITIONS

Before we attempt to formulate a definition of addiction, it is necessary to discuss certain terms; these are sometimes used as synonymous with addiction, sometimes so misused as to obstruct a clear view of the nature of addiction.

Physical dependence and the *abstinence syndrome* are closely related phenomena, since the existence of the first can be determined at present only by the occurrence of the second. Physical dependence refers to the physiological change produced by pro-

longed dosage of certain drugs. This change is of such nature that when the drug is withdrawn suddenly, the appropriate abstinence syndrome appears.

Physical dependence and the abstinence syndrome are best known as produced by the opiates. Himmelsbach has studied these phenomena exhaustively. He and his co-workers have developed a point score by which the intensity and duration of the abstinence syndrome can be measured(1, 2). Batterman and Himmelsbach(3) have reported the existence of physical dependence and an abstinence syndrome associated with the prolonged administration of demerol. Kalinowsky(4) has reported them in association with the consumption of and withdrawal from barbiturates, alcohol and paraldehyde. No abstinence phenomena have been reported as results of prolonged use and abrupt withdrawal of cocaine or of marihuana.

The view, presented by some, that abstinence phenomena are solely expressions of fear, anxiety or panic over the threat of deprivation of the drug, is based on insufficient study and observation, probably in part on a confusion between what the addict asks for and what his physiological needs are. Experimental evidence for the "objectivity" of the opiate abstinence syndrome exists. Wikler has reported the occurrence of a morphine abstinence syndrome in chronic "spinal" dogs(5) and in decorticate dogs(6).

Emotional elements such as anxiety or fear may complicate the picture in narcotic addicts who have previously experienced the abstinence syndrome; such elements are variable and depend on the personality of the addict and on the setting and manner of withdrawal. The abstinence syndrome is stereotyped, the only variations being in its intensity.

The term *habit-formation* must be dis-

¹Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

cussed, since so many persons use it as synonymous with the development of physical dependence. A habit is a type of activity that has been so well learned that the acts involved are carried out with little or no conscious attention. Habit-formation is the process of developing such types of activity. If used at all when discussing addiction, the term should be limited to the development in addicts of the habit of avoiding *all* discomfort or pain by taking refuge in some form of addiction. This habit, one of the serious complications of addiction, will be discussed later.

Cure perhaps should never be used in discussing addiction. Certainly its careless use as a synonym for the relief of physical dependence is incorrect and confusing. The relief of physical dependence is only a preliminary step in the treatment of addiction to opiates and to a few other substances. An assumption that this is a "cure" and that relapse by an addict when only relief of physical dependence has been accomplished indicates that treatment of addiction is hopeless, has led many persons into an unjustifiably pessimistic attitude toward the whole subject.

Even the use of the word "cure" as applied to the solution of an addict's problem in terms of total and permanent abstinence is questionable. When we apply this word to results in most diseases, we mean that the person who has been ill has recovered so completely that he is able to resume his usual activities. We definitely do not mean this when we refer to the "cure" of addiction. If we actually could "cure" a person addicted to alcohol who for years prior to addiction had been able to drink in moderation, we should expect him then to be able again to return to moderate drinking. Such results of treatment are so uncommon as to be almost non-existent; therefore, it is better to use other terms, *e.g.*, control, successful treatment, total and permanent abstinence, when referring to a successful solution of an addict's problem by total and permanent abstinence.

Euphoria has been used, usually in a derogatory sense, in discussions of addiction. The word means, quite simply, a feeling of well-being. It has been used, without qualification, to describe the feeling formerly

considered characteristic of general paralysis; it has also been used, again without qualification, to describe the state for which an addict to opiates is assumed to be striving. The situation can be simplified by considering that there are two kinds of euphoria, true, based on good health, and false, attained by the temporary suppression of pain or discomfort (7). Use of the adjective identifying the kind of euphoria that is meant would prevent misunderstanding.

Addiction requires the consideration of a number of factors before a definition can be developed. Even when these factors are discussed and evaluated a definition must rest on the attitudes and possibly the beliefs of users of the term. There can be no objection to this; the prime necessity is for the user to tell us just what he means when he employs the word. The term "addiction" need not be confined to the use of substances. Persons who pursue certain practices to their own or the public's inconvenience, harm or peril are sometimes a greater problem than those who misuse a substance. It may well be that internal or external difficulties responsible for the unwise pursuit of a practice and those responsible for the misuse of a substance are similar. Studies of persons who have personal or social difficulties associated with the pursuit of a practice might throw light on this possibility. In this presentation, however, discussion will be limited to the misuse of substances.

Some of the factors to be considered in attempting to develop a definition of addiction are:

- a. Self-control.
- b. Harm or injury of any kind to the user, to his group, or to both.
- c. Condemnation by society.

The use of the term "self-control" need not involve us in any metaphysical discussion as to free will. What is meant is the ability, not the "will-power," to follow or discontinue a type of behavior as a correct response to the situation in which an individual is placed.

How much of any one of these factors and how many of them, must be considered in developing a definition cannot be stated categorically. Legally, the determination of the existence of addiction to a narcotic drug rests, first, on social condemnation as ev

denced by the existence of statutes and, second, on the presence either of danger to society or loss of self-control with reference to one of the narcotic drugs.

In formulating a psychiatric definition, we might consider that the establishment of the existence of loss of self-control, and of harm to the user, or to his group, or to both, is an adequate basis for designating a person as an addict.

Uncertainty exists as to what substances may be regarded as addictive. The suggestion is offered that substances to which a significant number of persons first become addicted could be placed in this category, whereas drugs that are resorted to when the primarily addictive substance is not available, or in an attempt to correct physiological disturbance caused by the addictive drugs, would not belong in this category. Alcohol, opiates and the barbiturates are well-recognized addictive drugs. Benzadrine, until addiction to this drug by a considerable number of persons has been reported, is an example of the second category.

A physiological formulation might revolve around the question as to whether a substance tended to make a person less uncomfortable. When we are able to quantify tension satisfactorily, we may find that addictive drugs are those which either lessen tension or render the person less conscious of its effects.

Narcotic drugs are, by Federal statutes, opium and its derivatives, cocaine, hemp (usually called marihuana); peyote and demerol; only addiction to these substances is equally "narcotic drug addiction."

3. ETIOLOGY

Something more than introduction to the effects of a substance is necessary before addiction is established. Each year thousands are introduced to the effect of opiates and of alcohol without becoming addicts. Some difference may be assumed to exist between those who drink normally, or from time to time are given opiates without addiction, and those who become addicts.

At least three factors can be considered in erecting a hypothesis as to the personality of the potential addict and the reasons for the development of addiction. These are:

a. Degree of discomfort.

b. Ability to endure discomfort.

c. Strength, character, and orientation of internal controls of behavior.

a. Degree of Discomfort

Discomfort may be of any degree or kind from that of a toothache to a major depression. Dissatisfaction, frustration, unhappiness, tension, the discomfort resulting from "free-floating" anxiety—all these and many other conditions or situations that disturb equanimity or destroy true euphoria—must be considered.

An almost universal source of discomfort is tension. This may be defined as exaggeration of normal tonus to a point that produces discomfort. Irregular heart action, gastrointestinal symptoms, headache, restlessness, high or low blood pressure are a few of the accompaniments or expressions of this state.

A discussion as to whether an emotion causes or is the result of peripheral activities seems fruitless. He who maintains that the psyche is the important primary factor is faced with the necessity to define this in biological, non-metaphysical terms. He who thinks that the peripheral activity gives rise to the conscious elements of an emotion is faced with the equally difficult task of explaining the origin of the peripheral activity. The safest, most productive viewpoint seems to be that the entire cycle, cortical, mid-brain, vegetative nervous system, activity at the periphery and afferent stimuli resulting from it, constitutes the emotion; that study of any part as related to the whole may be productive, but that an attempt to "prove" that any part of the cycle is the emotion is fruitless. Further study and development and application of improved technics may show that the peripheral activity, and the sensations reaching the central nervous system as a result of this activity, are an essential part of an emotion; that as the level of this activity increases or decreases, the intensity of the emotion is intensified or ameliorated.

Whatever tentative viewpoint we may assume for purposes of more exact study, it seems certain that, for many persons, not the activity in the central nervous system, but its peripheral reverberations, are the elements of an emotional state that make the emotion unbearable. Anticipatory anxiety

alone may produce a well-planned approach to tomorrow's problem. If it is associated with severe "nervous indigestion" or with migraine, for example, proper planning and carrying out of plans may be totally disrupted.

Some degree of tension and its accompanying discomfort are probably necessary for many persons as a goad to socially valuable activity. It seems equally probable that for others the result of this goad is socially unacceptable, even dangerous, behavior.

b. Ability to Endure Discomfort

As is well known, the degree of ability to endure discomfort varies with ethnic groups, with the setting in which the discomfort is encountered, with the basic personality of the individual, and with the state of his health at any particular time. The interplay between this varying ability and variations in the level of discomfort probably forms the background for much human behavior and misbehavior. Another activity, or factor, must be considered before we can complete our formulation of the personality of the potential addict. That is:

c. Strength, Character and Orientation of Internal Controls of Behavior

It may be that ability to endure discomfort is a product or result of the internal controls of behavior. Both seem to result from training, either intentional or accidental. However, since they cover somewhat different aspects of behavior, they will be considered as manifestations of different processes.

An approach to an understanding of human behavior, especially when the organism is subjected to external or internal stress, requires that we assume that internal controls are of several kinds, each varying in strength and orientation. The type of control called conscience, or censor, or super-ego, works as though the individual when confronted by a choice of reactions, immediately and automatically selects the response that he has been trained to consider correct. Another type known as ego control seems to function as though the individual said to himself, "I won't do that because—" punishment, social disapproval, danger to his life

or welfare, etc., might result. The behavior of others seems to indicate that neither of these controls is present in detectable amounts. Behavior is regulated almost entirely by the presence of external authority.

Variations in social attitudes toward specific behavior patterns introduce an element (viz., orientation of controls) important in understanding certain types of archaic or anti-social behavior. Studies of behavior among children trained under Nazi control in Germany might disclose many with an automatic type of reaction, but the resulting behavior would be considered as highly undesirable. Making illicit whiskey is condemned legally; however, in certain isolated regions, this attitude never has been accepted by the community. In such a locality we might find a well-integrated, automatic control, archaic as related to the country as a whole, but of the same character and strength that would result elsewhere in socially acceptable behavior.

Reactions of persons with different types and degrees of control to certain substances are interesting. They throw light both on the character of the individual's controls and on the action of the substance. For example, persons with normally adequate ego control sometimes behave badly when overdosed with alcohol. They behave as though the part of the nervous system ordinarily dependable in calculating the effect of behavior had ceased functioning temporarily. The same person under adequate opiate dosage may remain quiet and well-behaved. This difference may be understood by the assumption that alcohol acts on some activity of the cortex, the lower levels being unaffected, while opiates act primarily on the lower levels of the brain to decrease the strength of primitive aggressive drives. The behavior of the person who "carries his liquor like a gentleman" no matter how intoxicated he may be can be viewed as the result of a control so automatic and ingrained that it remains active even when mental processes are profoundly affected.

The behavior of the person who conforms to the *mores* of his group only when under direct and efficient supervision resembles that of the immature child, in whom no controls of any kind have been developed. British writers discussing this type of be-

havior in adults use the term "moral imbecility." It can be thought of as analogous in the emotional sphere to imbecility in terms of intelligence.

The behavior of some persons indicates that the automatic control, the censor or super-ego, is hyperactive; failure to live up to perhaps impossibly high standards causes great discomfort and unhappiness. When the results of this situation are added to discomfort associated with other difficulties, and the individual's behavior deviates from what he regards as correct, serious disorders may result. When such a person resorts to addiction, he faces not only harm to himself or to his group; his own super-ego may be so troublesome that his addiction may become much exaggerated. A familiar example is that of the person who starts drinking early in the morning so that he may dull the recollection of his misbehavior of the previous evening.

When we consider the result of the interplay of these three factors in the production or prevention of addiction, the situation is simplified, and various approaches for study can be visualized. A high degree of discomfort with ability to endure it and with a control adequate to the situation may result in a successful career. The person may be unhappy, perhaps hard to get along with, but may accomplish a great deal. Whether this accomplishment is socially acceptable and valuable will depend upon the orientation of his controls. If the level of discomfort is too high for the ability to endure and controls are adequate and correctly oriented, we may have the chronic invalid, the valetudinarian, haunting doctors' offices, a follower of various cults, with a medicine cabinet filled with "remedies," ethical or otherwise, perhaps vulnerable to any widely publicized cure-all, but not addicted to the use of any substance disapproved by his standards. When controls are inadequate, misdirected or non-existent, and if the person is introduced to the use of an addictive drug, addiction may develop.

Just as it seems that any personality has its breaking point if internal and external stresses become too severe, so it is probable that anyone can become addicted if discomfort becomes intolerable. The addict whose internal control is automatic but inadequate

to the situation, can discard his addiction and work out a better compromise with the situation, if, before the complications of addiction have developed, the amount of discomfort is reduced to a level that he can endure.

4. COMPLICATIONS

After addiction has been established and has continued for some time, important changes occur which may greatly alter and complicate the problem of treatment. The most spectacular, but most easily relieved, is that of physical dependence on the use of certain substances, *e.g.*, opiates or alcohol. Serious, sometimes irreversible, changes occur as a complication of addiction to alcohol. These are usually secondary, *e.g.*, avitaminoses or trauma to the addict, particularly to his nervous system. Another more subtle change may be described under the term "regression." A recent book portraying the behavior of a man determined to obtain whiskey in spite of the efforts of his friends and relatives, gives an excellent picture of a part of this type of complication. When the use of a substance is forbidden entirely, as with marihuana, or limited to medicinal use only, as with the opiates, the situation is complicated by generally unsuccessful attempts to avoid apprehension, the necessity to associate with the underworld in order to obtain the substance, periods spent in jails and penitentiaries where close association with professional criminals is unavoidable. It would be difficult for a normal personality to undergo such experiences without harm; for the type of personality that seems to be the background for addiction, they may cause irreversible distortions.

Probably the most serious, the most insidious, the most important complication of addiction is the development of the habit of avoiding not only the particular discomfort that may have precipitated addiction, but discomfort, unhappiness, anxiety, in fact, any deviation from true euphoria, by the use of some addictive drug. Closely associated with this reaction, perhaps a part of it or a result of it, is reduction in or elimination of drive. An organism that is entirely comfortable does nothing. This is just as true of a man as it is of an amoeba. The addict

who is "high," that is, experiencing a state of false euphoria, will be valueless to himself and to his group. The time and effort spent in trying to attain and maintain this state will dissipate or misuse what drive he may have.

Another complication, perhaps a result of one or more of the complications already mentioned, is the practice seen among addicts of using large amounts of substances dissimilar in action from that of their drug or drugs of addiction. This may be an example of compulsive action; more probably it originates from a desire on the part of the addict to produce any change, no matter what, in his physiology.

5. PREVENTION

The prevention of addiction depends on detection and treatment of the preaddict personality before complications make the problem more difficult. The simplest approach to prevention is reduction in the amount of discomfort. Only a few sources of discomfort will be discussed; any student of human behavior will be able to mention many others.

A much neglected source of discomfort is an attempt to engage in an occupation for which a person is unsuited. Most people drift into, or are forced into, vocations without any attempt to determine their fitness for them. When the person's intelligence is inadequate for the vocation, when he is lacking in other necessary qualities, especially when the vocation does not give sufficient scope for his assets, discomfort, unhappiness and tension frequently occur. An additional difficulty develops because a person may be able to endure these until he reaches the period of presenescence. When severe maladjustments occur, even though we may find that the person would have been better adjusted, perhaps more useful, in another occupation, he will be too old or too rigid to change.

Information obtained from tests of intelligence, aptitudes and other aspects of the personality, if available for student counseling at least as early as the high school period, would prevent some of these tragedies. In certain situations, intensive psychotherapy for the individual or for his parents might be

necessary to enable him to follow a vocation for which he is suited instead of one with high prestige value but requiring abilities that he lacks. With this there should be methods of financing higher education for those with great capabilities but without the means to develop them.

Abnormal emotional states are a source of much discomfort. Some of them are difficult to treat, for example, compulsive states and chronic anxiety conditions. Depressions, however, frequently yield to some type of shock treatment. A difficulty is that reactive depressions frequently are masked by apparent cheerfulness or even jocularity. Workers with the Rorschach test sometimes are astonished to find, in persons whom they thought they knew well, large depressive elements. It seems probable that a significant number of persons become addicted to alcohol in an attempt to cope with depression. Here we could accomplish much in preventing addiction if such persons could be treated before addiction is established.

Another field for prevention is that of painful conditions which may be eliminated. Examples are: ruptured nucleus pulposus, and scalenus anticus syndromes. The latter frequently is overlooked, especially when generalized pain in the arm, not following peripheral nerve distribution, is the only symptom.

Relief from discomfort related to tension is sometimes simple. Recognition of its existence and intensity seems to lag behind our ability to handle it. If tension-related discomfort is recognized early, before a vicious cycle between the central nervous system and other parts of the body has been established, such simple methods as physical exercise will give relief. Training in conscious relaxation has been advocated(8). Change to a more suitable vocation, or when that is not possible, development of an interesting avocation, may provide a simple solution. For some, of course, all we can suggest is an effort to increase the patient's ability to endure discomfort. Even then a search for some remediable condition should be unremitting. Energy is needed for personality integration; when this is barely adequate, the extra load of an abscessed tooth or of some other toxic or painful condition may be sufficient to precipitate a serious personality

disorganization; removal of the apparently minor difficulty may prevent a catastrophe.

The pharmacological approach to discomfort must be cautious. Especially is this true in the use of opiates in the treatment of chronic conditions. If the condition is remediable, *e.g.*, a diseased gall bladder, and the patient refuses operation, the well-advised physician will withdraw from the situation. Even when a chronic painful condition cannot be relieved, the use of opiates should be avoided, or rigidly restricted in amount. The difficulty, especially if the patient has a "preaddict" personality (*i.e.*, is a potential addict) is that he will not be satisfied with analgesic dosage, but will demand, and probably obtain by one means or another, much larger amounts in an attempt to attain and maintain a false euphoria.

A pharmacological approach to the relief of tension and its attendant discomforts is also dangerous. If one could be certain that the patient would not exceed the minimal necessary dosage, the use of such drugs as the barbiturates might be justified. Here the use of a projective technic such as the Rorschach might be helpful. If this showed the existence of an adequate and well-oriented super-ego, one might feel safer in using pharmacological methods than if controls were inadequate or wrongly directed.

What can be done in the adult to increase ability to endure discomfort is uncertain. Improvement in general health will help. Psychotherapy, perhaps concentrating on the attitude of the patient toward the apparent cause of the discomfort, may be helpful. Persons fortunate enough in childhood to have been trained to attitudes of stoicism usually face the discomforts of adult life satisfactorily, and may be less liable to become addicted because of discomfort. As with many other personality difficulties, prevention should begin in childhood.

We are also uncertain as to what can be done with adults in modification or alteration in the character, amount and orientation of internal controls of behavior. In fact, very little is known about how these controls are developed, what is responsible for their failure to develop, or for the development of an over-active super-ego.

One phase of education and its effect on behavior controls deserves attention, namely,

the character of education in physiology encountered by young people. Many statements in school textbooks are grossly incorrect; others so distorted as to give entirely erroneous information concerning such matters as the action of tobacco and alcohol. After early control of behavior has been built upon such incorrect formulations, it is probable that when the falsity of school-acquired theories later is discovered, controls as to the misuse of such substances will be impaired seriously. It is even possible that attitudes toward matters correctly taught may be changed for the worse upon the disillusioning discovery of incorrectness and exaggeration in the teaching of other subjects.

When internal controls are inadequate or misdirected, it is necessary to institute external ones. An ideal situation would be that deviation from acceptable behavior would be followed immediately and inevitably by an unpleasant experience. Such a set-up is impossible outside the laboratory. Fortunately, for many persons even an approximation of the ideal situation described is adequate to supplement inadequate internal controls. It is possible that energy expended in developing such an approximation to this situation would give better and more dependable returns than the same amount of energy devoted to therapeutic interviews.

6. TREATMENT

The treatment of addiction requires the following essentials: control of the addict for a considerable period; relief of physical dependence, when this is a complication of the use of the drug or substances involved; removal, when possible, of sources of discomfort; increasing the ability of the addict to endure discomfort; improving, when possible, the internal controls of behavior; supplementing them, for a long period, with some type of supervision; correction of the complications of addiction, avitaminoses, regressive reactions, anti-social attitudes, and—most difficult of all—correction of the habit of taking some substance whenever the addict is uncomfortable or unhappy.

Control of the addict for a period of at least one year is imperative. Sometimes the period of control must be longer; for a few,

such control must be life-long. "Control" does not mean confinement in an institution. That is usually necessary for some months at the beginning of treatment. Supervision in the community, with the ability on the part of someone with the proper training to return the patient to an institution for further intensive treatment when necessary, is a type of control that is greatly needed.

The development of legal methods of restricting the personal liberty of the addict, analogous to those now functioning for psychotic persons, with utilization of them by communities, is highly desirable. Since most definitions of addiction include loss of self-control, it seems unrealistic to expect an addict to exhibit enough control to remain voluntarily in a drug-free environment.

At present, the only sure way to secure treatment and prolonged supervision after intensive treatment is to have the addict convicted of a felony in a Federal court. For many persons this is a rather drastic procedure. We should, by obtaining the cooperation of our colleagues in the legal profession and of our legislators, endeavor to work out a kinder but at the same time adequate method of control.

Such methods, even when developed, will not provide a complete solution. We must then encourage not merely among specialists but in the medical profession generally an interest in the treatment of addicts; we need institutions or units in institutions adequate for intensive treatment, and we must develop methods of proper supervision in the community after the period of intensive treatment.

Relief of physical dependence, once control of the patient is secured, is relatively simple. It is based on rapidly reducing dosage of the drug, *e.g.*, morphine, or of a pharmacological substitute for it, *e.g.*, barbiturates for alcohol or paraldehyde. General supportive measures, administration of large doses of vitamins and of adequate fluids and minerals, etc., are indicated whether or not the drug of addiction is one that produces physical dependence.

Many "cures" of opiate addiction, that is, allegedly easy, painless methods of relieving physical dependence, have been advocated. Some are harmless, some are dangerous. Any of them so far examined that do not

employ opiates may result in a fatality if marked physical dependence is present. It is strange that our profession finds it so difficult to accept the simple fact that the best basic treatment for the opiate abstinence syndrome is morphine in rapidly decreasing amounts. The physician who is entirely willing to grant that an addict to alcohol needs a "pick-up" to help him through the early stages of abstinence seems loath to admit that the addict to an opiate may need analogous treatment, not only for his comfort, but even to save his life.

The problems of discomfort and the strengthening of stoicism and of controls of behavior resemble those discussed in the section on prevention. After addiction has been established, the problem of making the unpleasant results of relapse to addiction immediate and inevitable is even more important than in prevention.

The best approach to the problems of regression and habit-formation is to secure, in fact, to enforce, early treatment of addiction. What of permanent value can be done after these are well established is uncertain.

Preliminary statistical surveys suggest that persons tend to recover spontaneously from addiction in their late forties or early fifties. Similar trends have been discussed in criminology. In evaluating methods of treatment, we must consider whether results are due entirely to treatment, or wholly or in part to aging.

An important part of the treatment of addiction is the preparation of the community to accept the addict after intensive treatment has been completed. This has been especially true for the addict to opiates. The myth of the "dope fiend" has been established so firmly that it is at times difficult to obtain for the addict an opportunity either to prove to society that he has regained the power of self-control, or to learn for himself that he has not. Communities which at least tolerate, if they do not actually condone, the aggressive dangerous activity of the addict to alcohol, are greatly upset by the presence in their midst of an addict to opiates, whose offense may consist merely in trying to obtain narcotics on a forged prescription. Patients who are given decent opportunities and who nevertheless fail should, of course, be given further intensive treat-

ment. They usually return to an institution in a relatively cooperative mood, but if no opportunity has been given to attain a self-respecting position in the community, the addict who relapses generally feels, and correctly so, that he has not been given a proper opportunity to rehabilitate himself.

The rôle of psychotherapy in the treatment of addiction warrants some discussion. The opinion is held by many that it is the most important approach to this as to other personality disorders. That is probably an oversimplification. The hypothesis that "psychic" disorders will be cured if the patient talks long enough to someone or if someone talks to him long enough and says the right things, is not easily tested. Certainly, many difficulties seem to be helped by superficial psychotherapy; nevertheless, we are confronted always by the possibility that the patient might have solved his difficulty unassisted, or that the improvement may be due to some other unrecognized alteration in his internal or external environment.

Prolonged psychotherapy may be of help for severe personality disorders associated with addiction. Practically, however, we are confronted by the hard fact that there are not enough persons suited by personality and training to care for all those who, we assume, could be benefited by this technic. Let us hope that there will be developed more short cuts to improvement in personality disorders as efficient as shock therapy, and founded on a more solid knowledge of what the basis for the disturbance really is, and what we are doing for it.

7. GENERAL

Basic in the whole attack upon addiction, in fact, upon all other personality disorders, is a better understanding of normal neurophysiology. No one as yet has demonstrated to the satisfaction of scientists the existence of psychological processes in the absence of a functioning nervous system. It is possible that the dualistic attitude which is almost automatic with us, the personalization of mental processes under the term of "the" psyche, the inability or the failure at least to tolerate a monistic approach to the problem, all these have retarded a better under-

standing of the problems of behavior and of misbehavior. When we can understand the normal at the level of anatomy, chemistry, physics and physiology, we may open up the possibility of control by relatively simple procedures.

An example familiar to all is the simplification of the control of diabetes by the development and use of insulin. Before its use great self-control had to be exercised by the diabetic, controlling and enduring the discomfort associated with his abnormal sugar metabolism. That situation now has been simplified greatly.

A faint premonition of a pharmacological approach to the control of behavior is the sometimes successful and spectacular improvement of mood following the use of amphetamine. When we understand how this substance in some instances changes "abnormal" to "normal" feeling tone, we may be able to develop more dependable methods. This, of course, is "substitutive" therapy, and sometimes is opposed rather strongly in the treatment of personality disorders. The objectors, if they are consistent, must condemn also the use of thyroid extract for myxedema, insulin for diabetes, and probably the use of sedative drugs in the control of epilepsy.

A seemingly narrow, but perhaps important field for study has been suggested by Robinson(9), namely, an attempt to discover what is the nature of the change that converts a normal user of alcohol to an addict. Such knowledge might enable us to prevent it, or perhaps to reverse the process. For many persons, this might solve the problem of abnormal drinking.

A mathematical approach to the problems of the relationship between psychological and neurological activity has been suggested (10-13). An approach which has been so rich in results in basic problems in physics, chemistry and biology certainly should not be neglected.

As the late Dr. Sachs suggested years ago, we need on our research teams experts in the basic sciences, not as technicians or ancillaries, but as full partners, sometimes as leaders. Fresh viewpoints, imagination in erecting hypotheses, ingenuity in testing them, complete liberation from archaic dual-

istic thinking about the problems of human biology, may prove as productive in exploring the cause and treatment of addiction and other forms of human maladjustment as they have in other fields.

Most narcotic addicts, when asked why they relapse to the use of their drug, reply, "Because it makes me feel normal." When we can acquire a body of knowledge that will enable us to do properly for the addict and preaddict what they are trying to do improperly, we may have solved not only the problem of addiction but many other riddles of human biology.

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THE USE OF AMINOPHYLLINE IN NEUROPSYCHIATRIC DISORDERS ASSOCIATED WITH CEREBRAL ARTERIOSCLEROSIS AND HYPERTENSIVE ENCEPHALOPATHY

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The admission of patients with cerebral arteriosclerosis or with hypertensive encephalopathy to a psychiatric hospital is necessitated in a number of cases by an acute confusional state. The accompanying restlessness and often the extreme agitation makes the patients unmanageable at home. Fluctuation in the degree of clouding of consciousness is characteristic for the psychotic episodes due to cerebral arteriosclerosis. Some of these patients are clear and rational most of the day but tend to become confused towards evening and at night during which insomnia persists. These episodes may recur or continue unabated over periods of years. It has been generally assumed that the pathogenetic factor is inadequate and unequal blood supply to the brain. Similar episodes occur also with hypertensive encephalopathy; however, the duration is here commonly limited to shorter periods. Psychotic phases associated with hypertensive disease are present frequently in the initial phases of the vascular disease at a time when the blood pressure is still relatively labile. Little attention has been given in the text books of psychiatry to these aspects of cerebral arteriosclerosis and hypertensive disorders, nor are specific recommendations for their medical care and handling to be found. For the practitioner, as well as for the psychiatrist, such cases are difficult therapeutic problems. The usual attempts at sedation with barbiturates not only fail but aggravate the confusion and promote additionally hallucinatory experiences. The same holds true for opiates and scopolamine. Frequently, therefore, refuge is taken in the undesirable methods of physical restraint.

In addition to delirious confusion and agitation, insomnia, dizziness and headache are obstinate symptoms which are difficult to cope with.

For a number of years we have administered to these patients aminophylline in dos-

ages from $1\frac{1}{2}$ grains t. i. d. to 3 grains q. i. d. assuming that the drug improves cerebral circulation by vasodilatation. It is accepted that aminophylline has a vasodilating effect on the peripheral vessels including the coronary. It increases cardiac output and lowers venous and intrathecal pressures, but the effect on the cerebral vessels is still a moot question. Our investigation was one of clinical observation only.

For the evaluation of the aminophylline effect we first reviewed the charts of all the male patients treated with this drug during the years 1944 and 1945. It appeared necessary to eliminate those cases in which the medication was given for only a few days or less. Also those cases were excluded which had received in addition KCNS because of hypertension, alkaloids because of extrapyramidal symptoms or testosterone. There remained 32 cases and of these 23 cases derived definite benefits from the medication. The table gives a short profile of the improved cases. It specifies the symptoms that improved or disappeared. Among these cases were 6 confusional states, all of which showed good improvement. On the other hand, retention and other memory defects were least amenable to change. Of the total 32 patients none died in the hospital; 27 were discharged to their homes and 5 were transferred to institutions.

We conclude that aminophylline has a place in psychiatric therapy and is to be recommended for the treatment of acute phases in psychoses with cerebral arteriosclerosis and hypertension. It is far more effective in sedating these patients than the barbiturate group. The latter frequently increase the confusion. With doses of aminophylline ranging from grains $1\frac{1}{2}$ to 3 grains q. i. d., confusional states cleared up often very rapidly. Vertigo and various forms of dizziness, headache, insomnia as well as neurological manifestations were greatly benefited in a number of cases.

¹ From the Neuropsychiatric Department of the University of Wisconsin Medical School.

Name	Age	Diagnosis	Findings	Response
M.M.	57	Meniere's syndrome on vascular basis, hypertensive encephalopathy.	Spells of vertigo once a week, unsteady gait, headache.	Improvement.
A.M.	64	Cerebral arteriosclerosis with confusional state.	Confusion, disorientation, severe agitation, retention defect, memory for recent events poor. B.P. 122/66.	Confusion and agitation disappeared quickly, retention improved. General mental weakness remained.
A.J.E.	59	Meniere syndrome on vascular basis.	Dizziness of vertigo type comes in spells, depressed because he could not work. Labile B.P. 165/90-107/70.	Vertigo disappeared.
J.J.S.	57	Hypertensive encephalopathy, generalized arteriosclerosis.	Fainting spells, dizziness, insomnia. B.P. 150/90.	Especially insomnia improved, dizziness better.
M.B.	68	Hypertensive encephalopathy, left hemiplegia, stroke 2 weeks before admission.	Left hemiplegia, memory impaired.	Improvement in every respect.
A.K.	75	Cerebral arteriosclerosis, spastic paraplegia, headache 2 years; spastic legs 8 years.	Headache, severe spastic gait, "electric shocks all over body." B.P. 150/80.	Headaches gradually improved, felt much better.
H.E.P.	74	Cerebral arteriosclerosis with confusional state following amputation of left leg below knee; confusion 2 weeks. Memory impairment 4 years. Had morphine and barbiturates.	Confused, disoriented; sleeping restless, delirious, pupils miotic; memory impaired. B.P. 140/70.	Acute symptoms disappeared.
J.S.	56	Cerebral arteriosclerosis with hallucinosis and depression, confusion and aphasia for 2½ weeks.	Depressed, retarded, hallucinations at night, people talking about him; confused at times, mild aphasia, agrammatism.	Good improvement, gained 16½ pounds. Stayed on medication, further improvement on re-examination 6/20/44.
O.F.S.	69	Cerebral arteriosclerosis, left sided hemiplegia, 2 weeks.	Left hemiplegia, left leg progressively weaker. B.P. 126/78.	Hemiplegia improved.
G.R.S.	78	Confusional state, arteriosclerosis and hypertension.	Confusion, aphasia, impairment of memory. B.P. 230/120 to 175/100.	Good improvement in six days.
L.E.	43	Hypertensive encephalopathy with depression and arteriosclerosis of brain.	Hemiplegia, depression. B.P. 134/100.	Good improvement.
D.H.	52	Arteriosclerotic encephalopathy, thrombosis of branches of left middle cerebral artery.	Visual disturbances, mental retardation, numbness right arm and leg, retention impaired. B.P. 134/84.	Improved a great deal, able to do light work on farm.
L.L.S.	60	Hypertensive encephalopathy; generalized arteriosclerosis.	Spells of dizziness, unsteady gait, headache, pain in legs.	No more dizzy spells, gait better.
L.D.	54	Hypertensive and arteriosclerotic encephalopathy right hemiparesis and cerebral atrophy especially left parietal lobe.	Pain and weakness of arms and legs, headaches, dizzy spells, difficulty walking especially in dark. B.P. 180/95.	Pain and dizziness disappeared. Neurological findings unchanged.
G.W.O.	62	Encephalomalacia and arteriosclerosis.	Pseudobulbar paralysis, Parkinson cerebellar syndrome, vertigo, dizziness. B.P. 120/80; headache.	Vertigo and dizziness, headache and sleep improved after 5 days.
J.T.	58	Cerebral and generalized arteriosclerosis.	Dizzy spells, numbness of right hand and foot, slightly euphoric and impairment of memory. B.P. 170/90.	Dizziness improved, otherwise no change.
V.G.	77	Cerebral and general arteriosclerosis, depression.	Retention impaired, confused, melancholia, agitation. B.P. 168/88.	Confusion improved, consciousness clear.
A.E.	66	Beginning cerebral arteriosclerosis.	Aching and burning pains in feet, staggering gait, insomnia.	Some improvement of gait, pain and sleep.
L.R.	58	Hypertensive and arteriosclerotic encephalomalacia; March 1942 and March 1943 stroke, both times right hemiplegia 2½ years.	Confused, clouded, memory defect especially recent, agitated, antagonistic, apprehensive "going to die." B.P. 196/120.	Acute symptoms improved.
H.A.	63	Cerebral arteriosclerosis.	Irritable, emotionally labile and incontinent, recent memory impaired, dizzy spells, fundi sclerotic vessels. B.P. 118/70.	Dizziness improved. Mentally slightly improved.
G.Y.	65	Cerebral arteriosclerosis, formerly hemorrhage from right superior cerebellar artery—9 years.	Pair. in both eyes, more in right. Dizzy spells. Ataxia. Fundi-sclerosis, horizontal nystagmus. B.P. 170/92.	Dizzy spells and pain improved; sleep improved.
G.A.	58	Encephalopathy on hypertensive basis—1½ years.	Comatose, cachectic, right pupil larger than left, stiff neck, had paresis rt. arm, March 1944. B.P. 150/90 to 212/118; bromide level 125 mgms. on admission.	Slight improvement.
C.J.P.	57	Encephalomalacia from hypertension—2 months.	Pressure in rt. side of head, staggering gait, left side of face numb and stiff, increased irritability. B.P. 204/100.	Considerable improvement of symptoms.

PSYCHIATRIC SYNDROMES IN PATIENTS WITH ORGANIC BRAIN DISEASE

1. DISEASES OF THE BASAL GANGLIA,¹

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Diseases of the basal ganglia constitute a chapter of medical knowledge which is still obscure. The outstanding symptoms presented by patients suffering from these diseases are disorders in motor function, but mental disturbances are common and often striking, even to the casual observer. The purpose of this study is to analyze the psychiatric status of a group of patients with various basal ganglia syndromes (Table I.)

TABLE I

Disease or syndrome	No. of living patients	No. of autopsied cases
Hepato-lenticular degeneration..	4	2
Huntington's chorea	2	1
Dystonia musculorum deformans.	4	2
Double athetosis	2	0

Two classes of patients were included: hospital in-patients, all of whom were personally examined by us, and a small number of autopsied patients whose records were considered adequate for psychiatric evaluation. The methods of examination were anamnesis, including medical, personal and social history, general physical and neurological examinations, including hospital laboratory data, mental status and psychometric examination (Wechsler-Bellevue). Reports of the occupational therapists and floor nurses, who had known some of the patients for many years, were also available.

Hepato-lenticular Degeneration (Wilson's Disease).—This disease was first described by Wilson(1) in 1912. Its etiology is still obscure, but the pathological changes, which are quite characteristic, include degeneration

and gliosis or even necrosis of both lenticular nuclei, less extensive degeneration in the cerebral cortex and in the white matter of the cerebellum, and hepatic cirrhosis of the portal type. There are usually deposits of pigment in the corneal limbi which are known as Kayser-Fleischer rings. The disease is nearly always fatal within a few years of its onset. The neurological symptoms are exclusively motor and are attributed to involvement of the striatal and cerebellar systems: rigidity, tremors (including the characteristic "wing-beating" tremor), involuntary movements of athetotic and dystonic type, emotional lability, dysarthria, dysphagia and mimetic changes. Clinical or laboratory evidences of liver disease may or may not be present at the time of examination but are usually obvious at some time before death. It may be of interest to note that in 3 of the 6 patients in our series, evidence of liver disease appeared before the first neurologic symptom, preceding it by 5, 5 and 3 years respectively. In 2 of these patients, the initial symptom was ascites, while in the third an attack of abdominal pain necessitated an exploratory laparotomy and the diagnosis of hepatic cirrhosis was established in this way.

Wilson(2) stated that the mental symptoms were variable and included both emotional and intellectual disturbances. He characterized the latter as "narrowing of the mental horizon" and felt the so-called terminal dementia was not a "true" one. Most other authors differ from Wilson on this point. Steinman(3), for example, reported on the mental symptoms of 4 pairs of siblings with the disease. In some of these dementia appeared early, in some late, and in others none was detectable at the time of examination. He agreed with Wilson that the overall picture showed great variation from patient to patient.

In our 6 patients, the psychiatric findings

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Psychometric tests done by Miss Elaine Grossman.

were as follows: 3 of the 4 patients whom we examined ourselves showed no evidence of intellectual deterioration at the time of examination (6, 6 and 1 year respectively after the onset of the first neurological symptoms), while the fourth (who was examined 5 years after the onset of her first symptoms) showed evident deterioration. This patient had an I.Q. of 73 on the verbal part of the Wechsler-Bellevue test with the highest relative scores in information and digits and the lowest in arithmetical reasoning and similarities. In the performance part of the test, she achieved an I.Q. of 57 (the digit symbol part of the test was not administered because of the patient's motor difficulty). She failed completely on the block designs, showed poor ability to comprehend and organize a total situation (picture arrangement) or to recognize and identify familiar objects and forms. Since this patient had graduated from the eighth grade of school and had been a notions buyer for a small department store before her illness, the scores she achieved on test were considered to indicate intellectual deterioration.

Of chief interest to us was the fact that in all 6 patients emotional tension or the feeling that they were performing under pressure accentuated the severity of the motor difficulties. Such changes in the severity of symptoms might be either brief or long lasting. In one case for example, there was a steady improvement in motor capacity over a ten-month period during which the patient was removed from his family, whom he bitterly resented, to a friendly and sympathetic environment. All of this improvement rapidly disappeared when he was told that he must return to his family, and when he finally did so, within 2 weeks after his return he had regressed completely to his original state of disability. Moreover, brief exacerbations of symptoms could be elicited in any of the patients by a suitable test situation in which the patient felt the need to perform under pressure.

None of our patients exhibited any striking or constant peculiarities of mental content. The mood was very different in different patients or in the same patient at different times. It might be cheerful, euphoric, irritable, depressed or apathetic.

Huntington's Chorea.—This disease was

first described in 1812 by George Huntington(4) a practitioner on Long Island. The disease is classically familial but many sporadic cases occur. The characteristic pathological findings are atrophy of the cerebral cortex, the caudate nucleus and the putamen. The clinical course is progressive. The neurologic symptoms are involuntary, choreic and athetotic movements which begin insidiously, often in the proximal muscles of the extremities, eventually spreading to involve the entire musculature.

Emotional instability may be the first mental symptom but signs of intellectual deficit always appear sooner or later. Hochheimer (5) from an intensive study of 3 mild cases of the disease, concluded that the essential psychological disturbance is inability to remain on a single train of thought or to remain concentrated on a single thought at all. This symptom, which the author called a disturbance of "motor thought," was also noted by Lion and Kahn(6) in 1 of 10 cases of Huntington's chorea which they studied. Other authors do not appear to have remarked upon it.

Only 1 of our 3 patients had a positive family history. Otherwise they were typical cases of the disease with severe, generalized chorea and evidence of intellectual deterioration. One of the 2 living patients received the Wechsler-Bellevue test. His I.Q. on the verbal scale was 74; that on the performance scale could not be measured because of his motor difficulty. His best performance was in arithmetical reasoning but he was unable to repeat any digits backward and did very poorly on similarities. Before the onset of his illness he had been a salesman of electrical supplies.

Both of the living patients were ambulatory. They showed marked diminution of the involuntary movements with concentration of attention. For example, one of them, whose chorea during the examination was so severe that he could hardly sit still, lost most of his involuntary movements when he picked up a newspaper to read aloud to us and was able to sit and read in relative quiet. On the other hand, unpleasant experiences or failures in attempting to perform a given task were followed by an increase in the choreic movements.

Conversation with these patients is often

difficult because their speech is so dysarthric that it is nearly unintelligible. Attempting to assess such a patient's mental content is therefore a laborious and usually unsatisfactory task. The incessant facial grimaces and bodily contortions similarly handicap the examiner in attempting to judge objectively the patient's mood and degree of interest in his environment. With due regard to these limitations we found the mental content of the 2 patients whom we examined personally to be remarkable only for defective judgment and insight which were considered to be related to their intellectual deficit. The mood of one patient was rather irritable, that of the other, indifferent and flat. This second patient had been hospitalized for a depression with paranoid trends for about one year, two and one half years before the onset of his choreic movements. No similar psychotic symptoms were apparent at any time during the eleven years which had elapsed between the onset of his neurological symptoms and the time of his examination. The records of the autopsied patient, whom we did not examine, described him as being euphoric and apparently hallucinated in the visual sphere. This patient was bedridden and died 4 months after hospital entry.

Dystonia Musculorum Deformans.—Oppenheim(7) in 1911 described 4 cases which had peculiar muscular spasms involving principally the thighs, pelvis and spine. He proposed the term dystonia musculorum deformans for this group of cases and stressed the organic nature of the syndrome. Among previous workers, Schwalbe(8) and Ziehen(9) reported on similar cases but stated that the abnormal movements were hysterical or other neurotic manifestations.

Although it is now generally agreed that Oppenheim was right in considering the movements to be organic rather than psychogenic in etiology, the original conception of dystonia as a disease entity has been challenged by numerous investigators. Herz(10) in a recent review of the subject, stated that the dystonic movements appearing with Wilson's disease, Huntington's chorea, epidemic encephalitis or with trauma, infections, vascular insults, etc., should be separated from the group of cases with gradual development of dystonic movements and postures and no recognizable etiologic factors at the onset.

He suggested that the diagnosis of dystonia should be reserved for this latter group.

The etiology of this disturbance is completely unknown and, perhaps because the duration of life is not greatly affected by the disease, the nature of the underlying pathological process is not too well known either. Davison and Goodhart(11) have reported lesions of the corpus striatum in a group of dystonic patients, one of whom had associated nerve cell loss in the cerebral cortex. The neurological symptoms consist of involuntary movements of the trunk and extremities which differ from those of athetosis only in that they are so much slower. In some patients there are few dystonic movements but marked rigidity and abnormal postural attitudes. This syndrome is referred to as the myostatic or akinetic type of dystonia.

The psychiatric findings of interest in our 6 patients were as follows. The abnormal movements were made worse by any voluntary effort in all 4 of the patients whom we examined personally and a note to the same effect was found in the record of one of the two autopsied cases. One patient had frequent "negative movements," that is, his hand or fingers would move in exactly the opposite direction from that in which he tried to make them move.

Intellectual deterioration was present in 1 patient, absent in 3 and impossible to estimate in the other 2 because of difficulty in communicating with them. It might be worth mentioning that when a dystonic patient's motor disability is severe, one generally underestimates his intellectual ability at first and then when the patient does better than one had expected, the tendency is to overestimate it. One of the autopsied patients, who had been mentally defective from birth, showed evidence of considerable cellular loss in the cerebral cortex.

Emotional outbursts or lability were noted in 2 patients. None of the patients was ambulatory, but those who could get about in a wheel chair had good social contact with the other patients. One of them spent much of his time at a typewriter in the occupational therapy department laboriously writing a novel. The mental content of those patients in whom it could be determined, was normal.

Double Athetosis.—The syndrome of athe-

tosis (literally, "without fixed position") was recognized and named by Hammond(12) in 1871. The slow, writhing movements of the limbs, body and face which he described may be associated with birth injuries, vascular accidents, syphilis of the central nervous system, encephalitis, Wilson's disease or Huntington's chorea. Even the precise location in the brain of the lesion or lesions required to produce athetotic movements is not known, though it is presumed to be somewhere in the striatal system. However, a particular condition referred to as double athetosis has been thought by some to be a specific disease entity. It usually starts immediately after birth but is not recognized at that period because infantile movements are normally incoordinate. The child has bilateral, abnormal movements of the extremities and face. It learns to walk, if at all, at about 3 to 4 years of age and the gait is usually staggering or stumbling in type. Dysphagia and explosive speech are prominent. Epileptiform convulsions usually appear but according to many observers the mentality is not affected.

We can report on only 2 patients with this syndrome. Both were considered to be mentally defective on the Wechsler-Bellevue test though it was not possible to assign a valid, precise, numerical score to their performance because of their motor and speech difficulties. As in the case of the severely dystonic patients, one tended at first to underestimate and then to overestimate their intellectual ability.

Emotional excitement or tension was accompanied by an increase in the severity of both patients' involuntary movements. Of particular interest was the observation that when the attention of the patient was focussed on a specific task, the abnormal movements diminished in the parts of the body from which the patient's attention had been diverted. This is frequently true of abnormal movements of hysterical type and has indeed been considered by some to be diagnostic of hysteria, a view which is clearly not correct, as our patients demonstrated. Both patients were cheerful and friendly and were well adjusted to the routine of the hospital where they had lived for many years. The mental content was not remarkable in either.

DISCUSSION

Our findings are in agreement with those of many other authors that the mental symptoms shown by patients with the various basal ganglia diseases are consistent chiefly in variability. There is no evidence that most or all of the patients in any of the diagnostic categories studied here show similar disturbances of either mood or ideation. This finding is in agreement with the reports of Steinham(3) and Lion and Kahn(6). The presence or absence of intellectual deterioration is readily correlated with the degree of cortical damage which is known to occur in the various diseases. Such deterioration is most frequent in Huntington's chorea, the disease in which cortical changes are most prominent pathologically, and least frequent in dystonia. In the case of hepato-lenticular degeneration, evidences of intellectual deterioration may appear early or late but are apparently always present eventually. Both of our patients with double athetosis were mentally defective and had always been so. However, as is well known, some patients with this disease are of normal or even superior intelligence. In our 2 patients there had been no change in intellectual capacity for many years at least.

There was one striking feature of the behavior of these patients on which we wish to place particular emphasis. This was the effect which their psychic state had on their abnormal movements. Under the stress of unpleasant emotional tension the abnormal movements would become worse, often much worse, with corresponding improvement under more favorable circumstances. Moreover the involuntary movements of the patients with Huntington's chorea grew less severe when the patients concentrated on a specific task. This improvement was generalized, but most noticeable in the parts of the body directly concerned in carrying out the task. A similar phenomenon was observable in the patients with double athetosis, but with the difference that in these patients the improvement was limited to the parts of the body from which attention was diverted while carrying out the task. This sort of fluctuation in the severity of involuntary movements with changes in attention is often seen in hysterical patients and it is sometimes

considered to be diagnostic of that disease. The incorrectness of such an interpretation is clearly shown by the findings in our group of patients with diseases of the basal ganglia.

We venture to propose the word "psychosensitive" to describe these abnormal movements in order to emphasize the relation between the severity of the movements and the patient's psychic state. The similarity of this word to the widely used term "psychogenic" should also call attention to the frequent difficulty in differentiating diagnostically between basal ganglia disease and psychoneurosis (single or multiple tics). Unless one is familiar with the bizarre movements presented by patients with basal ganglia disease the differentiation may be extremely difficult and in occasional cases in which the symptoms are not yet advanced, it is quite impossible to be sure of a diagnosis at the time of examination.

Finally the word "psychosensitive," with its emphasis on the interrelation between the severity of the involuntary movements and the psychic state of the patient, may remind us that skillful and appropriate psychotherapy should be used in these cases when possible in the reasonable hope that symptomatic improvement will ensue. In addition to psychotherapeutic interviews when feasible, one should aim toward amelioration of unfavorable emotional stresses by providing the patient with a friendly, accepting and protecting environment with opportunities for as much emotional gratification as possible in the forms of activities (occupational therapy) and interpersonal relationships. In the absence of any etiologically directed form of therapy, psychotherapy must, for the present, occupy first place in

the therapeutic armamentarium, despite its purely symptomatic nature. The case cited in the section on hepato-lenticular degeneration will serve as an example of the improvement that may follow successful psychotherapy even in a patient with progressive disease of the central nervous system.

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THE EFFECT OF ANOXIA AS MEASURED BY THE ELECTROENCEPHALOGRAM AND THE INTERACTION CHRONOGRAM ON PSYCHONEUROTIC PATIENTS¹

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During the past ten years we have been interested in investigating the autonomic nervous system in the psychoneuroses. Previous studies have shown that psychoneurotic patients differ from control subjects in respect to heart rate(1), ventilation(2), sighing respiration(3), and other aspects of the respiratory pattern(4) during basal conditions and during sensory and ideational stimuli. More recent studies(5, 6) from this and other laboratories indicated that psychoneurotic patients, especially those with anxiety neurosis and neurocirculatory asthenia, show a disturbance in the oxygen uptake or oxygen utilizing mechanisms. Further in a series of studies on the selection of aircraft pilots, in collaboration with the Bureau of Medicine and Surgery of the U. S. Navy, a correlation was found between failure in flight training and behavior and between failure in flight training and autonomic overactivity(7), and certain characteristics of behavior which are found in states of anoxia.

In pursuing this problem we felt it wise to study the direct effect of inhaling mixtures low in oxygen upon the CNS activity as determined by the electroencephalogram and behavior as measured by the interaction chronogram. It is the results of these latter studies that are presented in this paper.

The effects of anoxia on the EEG in man were studied by Berger(8), and later by

many others, most notably Gibbs and Davis (9), Lennox, Gibbs, and Gibbs(10), Gibbs, Williams, and Gibbs(11), Davis, Davis, and Thompson(12), and Gerard(13) and his collaborators. All investigators report that in breathing mixtures low in oxygen a shift to the slower frequencies occurs in the EEG.

Many observations are available on the effects of anoxia on behavior and on certain psychological functions. MacFarland(14), Barach and Kagan(15) describe changes in behavior during anoxia. These changes, not so readily measurable, refer to loss of emotional control, excitement, garrulousness and destructiveness on the one hand or apathy and unresponsiveness on the other. Simultaneous observations on the EEG and the performance of subjects as exemplified by the critical flicker fusion frequency, as studied by Gellhorn and Hailman(16), indicate a parallelism between the degree of change in critical potentials and in the critical fusion frequency. The effects of anoxia on more elaborate psychomotor responses and in phantasy formation(17) have also been reported. In the present study a series of psychoneurotic patients and normal control subjects was interviewed by the use of a standardized procedure while sitting in an anoxia chamber and while breathing mixtures of room air (approximately 21% O₂) and while breathing mixtures low in oxygen. Electroencephalographic records were made at various intervals throughout the procedure and the activity as indicated by the length of the periods of talk and gestures was measured throughout both interviews(18). Data are presented comparing the results obtained at low oxygen levels with those obtained while breathing air.

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PROCEDURE

The subjects, both patients and normal controls, were subjected to the same procedure. The subjects were all under non-basal conditions, and the experiments were all done in the morning. Each subject was given 50 c.c. of 50% glucose p.o. while sitting in an adjacent laboratory and the scalp electrodes were attached. The subject then sat in the anoxia chamber while the leads from the scalp electrodes were attached to cables leading to the EEG apparatus. A capillary blood sample was drawn for the determination of the blood sugar level. This was done because we have previously shown (19) that blood sugar levels of 110 mgm./100 c.c. and below might influence the frequency of cortical potentials. After this the subject was asked to close his eyes and an EEG record was obtained for a period of 2 minutes. This served as a base line for the EEG determinations. The hood of the anoxia chamber was then closed and the patient was then interviewed. The anoxia chamber was connected directly with a spirometer, whose capacity was 350 liters. A circulatory pump in the circuit insured complete mixing of gas in the spirometer and in the chamber. The CO_2 was absorbed by means of soda lime, through which the gas was pumped. At the beginning of the experiment the spirometer contained about 50 liters of room air.

After the first interview which lasted about 30 minutes an amount of N_2 was introduced into the spirometer to attain the desired oxygen mixture. It was found that a 10 minute mixing period was sufficient to obtain adequate mixing. After the mixing period the subject was interviewed again for a similar period. When the second interview had been completed, the hood was then lifted and the subject was in most instances asked to describe his reactions during the experiment. Samples of gas were taken from the chamber every 15 minutes from the beginning to the end of the entire experiment for analysis of oxygen and CO_2 . Electroencephalographic records were obtained every 15 minutes throughout the interview and continuously for a five-minute period at the very end of the experiment and throughout the whole period while the hood was lifted and for 3-5 minutes after that. Each of the

EEG runs was at least two minutes in duration and all were recorded with the subject sitting quietly with his eyes closed.

THE INTERVIEW

In the course of our work it was found expedient to adopt a standard, or controlled, interview. Experiment showed that variations in the interaction rate of the interviewer brought about specific changes in the interaction rate of the subject, and the interviewer—unless very skilled—tended to persist in his natural rate. It was possible to set constants for the differences between interviewers, but it was more effective to get them to control their behavior by learning to follow a specific timing pattern. This pattern, made up of standardized variations, formed the standard experimental interview for determining the effect of controlled changes in the interviewer's behavior upon the subject's own pattern. A detailed description of the interview follows:

The interview is divided into 5 periods, each of which is introduced by a general topical question relating to the subject's own experience. Three of the periods, the 1st, 3rd, and 5th, are alike in the prescriptions for the interviewer's behavior, although the 1st takes 15 minutes, while the other 2 last 5 minutes only. In these 3 periods, the interviewer, after introducing the general topic (such as: "How do you get along at home?") is instructed to wait one or two seconds before replying when the subject stops and to use only such encouraging phrases as "Isn't that interesting," "Why," "Can you give me an example of that?," or to rephrase the last phrases of what the subject has just said.

After the first 15 minute period, a new topic is introduced by the interviewer and during the period devoted to that topic, the interviewer is instructed to change his behavior systematically from that previously used. When the subject stops talking, the interviewer waits 10 seconds before replying. If the subject starts to talk without waiting for the interviewer, the interviewer waits again when he pauses, and repeats the procedure ten times. Only if the subject waits for the full 10 seconds after one of his actions will the interviewer reply, rephrasing the original question or the subject's previous answer. This period during which the interviewer fails to reply is followed by a five-minute adjustment period introduced by a question on a new topic. At the end of the 5 minutes, a new topic is introduced and the interviewer now starts to talk during the subject's first reply and tries to talk him down, using a normal voice, and rephrasing the question just asked. These interruptions are repeated ten times. If the subject does not reply after the inter-

viewer stops interrupting—that is, the interviewer has succeeded in out-talking him—then the interviewer waits 3 seconds and then asks another question. The next and final period is a period of readjustment of 5 minutes, in which the interviewer tries to adjust to the subject.

In order to judge the time accurately, a large clock with a sweep second hand is placed behind the subject, where the interviewer can see it without having to turn his head. The five periods should take approximately 25 to 30 minutes, and on the graph each period is marked by the signal marker, which is pushed by the observer when the key question is asked.

DATA

In the present study experiments were performed on 67 patients and on 36 control subjects. The patients were individuals treated on the wards and in the Out-patient Department of the Psychiatric Department of the Massachusetts General Hospital and individuals undergoing treatment at the U. S. Navy Hospital at Chelsea, Mass. Most of the patients were diagnosed as having psychoneuroses of various kinds—the largest group consisting of patients with anxiety neurosis. They ranged in age from 15 to 43—there were 20 females and 16 males. There were 36 control subjects who were chosen from the medical students, doctors, hospital technicians and W.A.V.E.S. working at the Chelsea Navy Hospital. Their ages ranged from 19 to 38. The control subjects were not under treatment. Complete data as to the presence or absence of symptoms for the control group is not available. However, in a small series of 10 control subjects who were interviewed, one subject merited a diagnosis of psychoneurosis. Two subjects showed evidence of occasional psychoneurotic symptoms. As far as could be determined the other 7 had no psychoneurotic symptoms. If this sample is reliable, one would have to conclude that a small percentage of the control subjects merited the diagnosis of psychoneurosis.

GENERAL REACTIONS TO ANOXIA

On the whole the changes in behavior noticeable were of two distinct types. At one extreme subjects became restless, appeared distressed and demanded to have permission to leave the anoxia chamber—this was likely to happen during the mixing period. At the

other extreme subjects became more and more uncommunicative and then ceased to respond altogether so that the experiment had to be interrupted. These two extremes: acute apprehension with restlessness on the one side and apathy with failure to respond on the other side, seemed to be two poles of a continuous series presenting various combinations of the factors mentioned. It is of interest that the restless state was often attended by phenomena suggesting autonomic stimulation; sighing respiration, flushed face, profuse sweating, while the apathetic state seemed to develop insidiously without any dramatic manifestations.

In addition to the detailed observations to be presented below, there were certain general differences in the reactions of the subjects at low oxygen. Approximately 20% of the subjects were unable to finish the experiment. About 10% discontinued because they fainted, felt faint, dizzy or were nauseated. There was little difference between patients and controls in these items. Two of the patients were excited and felt jittery, and 2 of the patients were uncooperative.

Many of the subjects complained of subjective feelings in response to anoxia. About half of the patients and control subjects complained of fatigue, about one-fifth of the patients and controls complained of dizziness. Approximately 40% of the patients complained of headache, restlessness and tenseness. These complaints were mentioned by only two of the control subjects. Difficulties in thinking, and "heaviness," were mentioned by one-third of the control subjects, but by only 2 of the patients. A few patients and a few control subjects complained of numbness, sensation in their ears and faintness. Three of the patients complained of fear during the experiment and three of the control subjects mentioned breathing difficulties.

In addition to the subjective sensations reported, the effects of anoxia could also be observed in the manner in which the patients communicated with the interviewer. A change in the flow of speech was noted. During low oxygen the pauses before answering the interviewer's questions became longer. Sometimes there was a complete failure to respond to the questions of the interviewer. At times the answers to the interviewer's questions became short and often monosyl-

labic. Occasionally there was an increase in the number of repetitions. Often these were simple repetitions of an idea, and some subjects repeated phrases without stimulation by the interviewer's questions. In many cases there was an apparent reduction in the choice of words and the vocabulary seemed to be constricted and it was as though the patient were operating on a simple level of language structure. In many instances there was a marked change in the rate of speech and it seemed as though the subject were less able to follow and to respond to the interviewer's questions. The subjects tended to lose contact with the interviewer and would continue to speak in an irrelevant fashion. It was the impression of the observers that the subjects seemed more preoccupied with internal phenomena.

There was some evidence that the subjects tended to shortcut their ideas, leaving out connectives. In a few instances certain symptoms which the patients had were apparently aggravated by low oxygen. Two of the group began to stutter toward the end of the interviewing.

THE EFFECT OF ANOXIA ON THE ELECTROENCEPHALOGRAM

As mentioned above Berger was the first to show that lowering of the O_2 concentration of the inspired air slowed the rate of the cortical potentials and this observation has since been abundantly confirmed by other workers. It was our purpose in this study to apply this fact as an objective method for assessing the degree of response of an individual to low O_2 concentrations. This entailed the development of a method of measurement of these rhythms in order to be able to quantitate any changes which took place. As the purpose of any such index of measurement was to demonstrate slowing of rate, a distribution curve was made of the frequencies up to 17 cycles per second present in a two-minute sample of each electroencephalographic recording. One such is shown in Fig. 1. The method for preparing such a distribution curve has been described in a previous paper (20). In Fig. 1 a normal EEG is seen at the top and the curve of its frequency analysis is shown below. In this particular example the greater portion of

the record was occupied by waves of 10 and 10.5 cycles per second frequency with lesser amounts of other frequencies. If any slowing of this EEG were to take place due to the

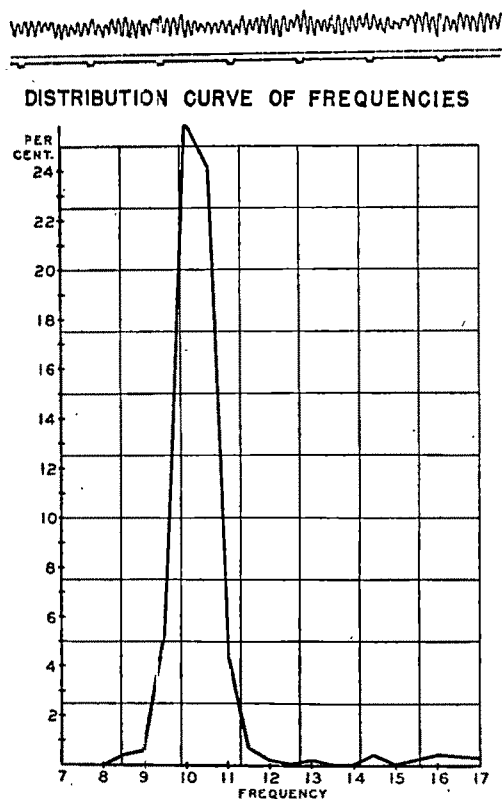


FIG. 1.

EFFECT OF ANOXIA ON THE ELECTROENCEPHALOGRAM



FIG. 2.

subject's breathing low O_2 , one would expect the whole distribution curve to move to the left into the range of slower frequencies. This is, in fact, what was found in 85% of the subjects tested (59 persons). In some cases the slowing was so gross that it could easily be seen by inspection of the original tracing and one such example is shown in Fig. 2.

In some records, however, one would have more difficulty in deciding whether a slowing of a rate had taken place if only inspection of the original tracing were used. For example, in Fig. 3 the EEG is shown of a

EFFECT OF ANOXIA ON THE ELECTROENCEPHALOGRAM

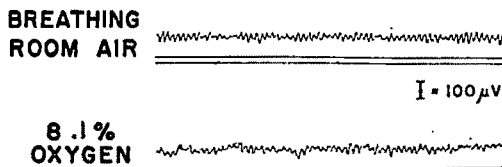


FIG. 3.

One Example of the Distribution of Frequencies in the Record of an Individual Breathing Air and of the same Individual Breathing 8.1% Oxygen.

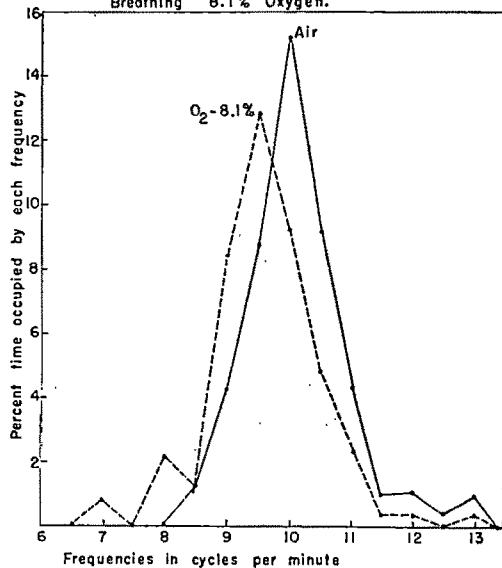


FIG. 4.

subject in air and when breathing 8.1% O₂. The distribution curve of the frequencies, however, which is shown in Fig. 4 demonstrates quite clearly a significant slowing.

Since some index was wanted for use as a quantitative measurement to correlate with other factors some expression of this shift of the curve to the slower frequency was searched for which could be expressed as an integer. There are many features of this shift which might be used as measurement.

For example, the amount of activity slower than a certain frequency could be used and this would obviously be greater in the left hand curve than in the right and would give some measurement of the slowing of the EEG, or one could use the shift of the peak of the curve which we call the dominant frequency since that is the frequency which dominates the whole of the electroencephalographic tracing. It is obvious that the dominant frequency is not an infallible index,

EFFECT OF ANOXIA ON THE DISTRIBUTION CURVE OF THE ALPHA FREQUENCIES

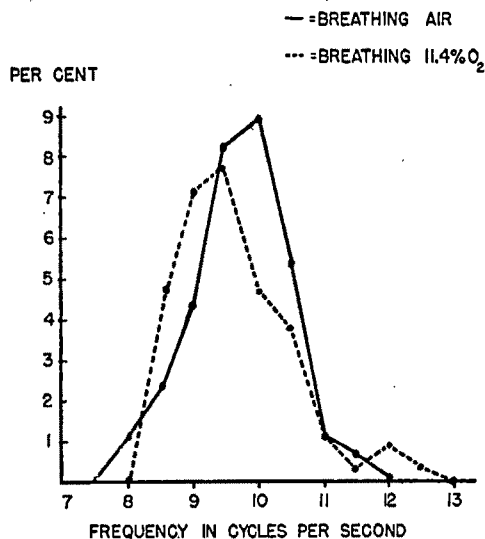


FIG. 5.

since the body of the curve could shift to the left without a change in the peak, but it has proved to be a reasonably adequate measurement of slowing. Since all aspects of the data cannot be presented here this will be the one measurement discussed and used in the computations which follow. As noted above its use does mask the effect of anoxia in some cases and thus gives an understatement of the effect of low O₂ on the EEG.

Fig. 5 is another example of a shift of the curve to the left when breathing low O₂, in this case only as low as 11.4%. In any large group of individuals breathing air the dominant frequency varies from person to person but when charted out shows a distribution curve around the most common value for

normal people which is 10.0 to 10.5 cycles per second(20).

The distribution curve of the dominant frequencies of 37 individuals breathing air charted as a solid line is shown in Fig. 6. On the same figure the broken line shows the shift for these same 37 individuals with O₂ levels below 11%. This figure shows a difference between the EEG of a group of people in air and at low O₂ levels, but it does not give information as to whether this

Distribution of Dominant Frequencies
Among 37 Subjects

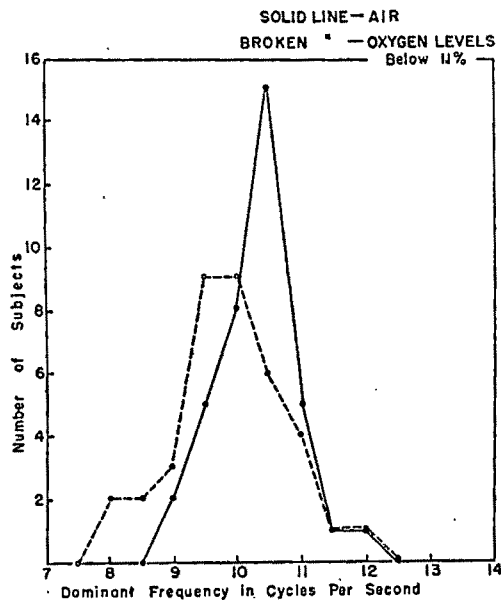


FIG. 6.

lowing takes place suddenly or whether it is a response which is graded with the level of anoxia involved.

In Fig. 7 this same group of 57 subjects as been divided into two portions: those who were breathing O₂ levels below 10%; and those between 10 and 11%. It is immediately clear that the average slowing is greater the lower the O₂ levels. Here then is one variable which affects the degree of slowing. In other words the degree of slowing is dependent upon the degree of anoxia. There is, however, another variable at work and this is the CO₂ level. Great technical difficulty was experienced in eliminating all the expired CO₂ from the circuit since it accumulates so quickly that some inevitably

remains to be rebreathed. In none of the 57 cases reported here was the CO₂ over one-half of 1%, but a marked difference was found between the degree of response to low O₂ between those subjects who were breathing less than 0.3% CO₂ and those who were breathing between .3 and .5% CO₂. There was a greater slowing of the EEG at the lower CO₂ levels.

MEAN CHANGE IN DOMINANT
FREQUENCY AT
VARIOUS LEVELS OF ANOXIA

OXYGEN LEVEL	NO. OF SUBJECTS	MEAN. SLOWING
BELOW 10 %	29	-0.4 CYCLES
10% UP TO 11%	28	-0.2 CYCLES

FIG. 7.

INFLUENCE OF CO₂ LEVEL ON DEGREE
OF SLOWING OF EEG
AT TWO LEVELS OF ANOXIA

	CO ₂ BELOW .3%	CO ₂ .3% TO .5 %
O ₂ BELOW 10%	-1.1 N= 5	-0.3 N= 24
O ₂ 10% UP TO 11%	-0.4 N= 10	-0.1 N= 18
SLOWING OF DOMINANT FREQUENCY (IN CYCLES PER SEC)		

FIG. 8.

In Fig. 8 both variables are reported—the degree of anoxia and the amount of CO₂ rebreathed. Where both the O₂ and the CO₂ were low there was the greatest slowing of the EEG. Where the O₂ is only reduced to the 10 or 11% level and the CO₂ is over 0.3%, the dominant frequency shows a mean slowing of -.3 cycles per second.

The influence of CO₂ on the reaction of the EEG was expected from all the work that has been done in this field, but it was an unexpected result to find that CO₂ exerted

its influence at such low concentrations as 0.3%.

There seemed to be little difference between the patients and the control subjects in their reactions to anoxia when the records were analyzed as described above.

EFFECT OF ANOXIA ON THE INTERACTION CHRONOGRAM

The interaction chronograph is operated by an observer seated behind a screen through which a one-way mirror gives a view of the interview. In front of him is a small box with two keys, one for the subject and one for the interviewer, and a push-button switch, which operates as a signal marker. All he has to do is press down the appropriate key when either person starts to act—by talking, smiling, nodding or gesturing—and hold it down until the action is over. He watches closely the visible activity of the facial muscles, recording contractions as activity and relaxation as inactivity. Any fixed grimace or nervous twitching which is not part of a sequence of interactions is not recorded.

By this simple operation, the five pens of the chronograph trace out five curves which record the relative duration of the subject's periods of activity and of silence. Two of these, the activity and the speed curves, record the subject's behavior; the other three record aspects of two individuals' interaction with each other. They are the subject's adjustment curve, the interviewer's adjustment curve, and the initiative-dominance curve. For the purpose of this report the activity curve alone will be considered.

Activity Curve.—When the subject's key is pressed down first, a pen starts to move along a vertical bar in a positive, or upward, direction, and continues on until the action ends. When the subject's key is released at the end of his action, the pen reverses its course and moves downward in a negative direction while the subject is silent. Each time the subject begins to act, a mechanism moves the paper one step to the left. Thus the resulting graph represents the cumulative sum of the differences of the actions and inactions. If, for instance, a man talks on for 60 seconds and is silent for only 1 before beginning again, the curve will ascend at the rate of 59 seconds for the complete unit of

action and inaction: if he is silent for 60 seconds and talks for only 1, the curve will descend with the obverse slope.

The activity values were obtained by direct measurement from the charts as produced by the interaction chronograph. For the purpose of this report the data on two variables will be presented: the A-S values and the A values.

The A-S value represents in seconds the algebraic difference between the period of activity (talk and gesture) and the period of inactivity (silence). The values were obtained by measuring (for a period of the

PERCENT OF SUBJECTS SHOWING DECREASE OF ACTIVITY AT LOW OXYGEN LEVELS AS COMPARED TO AIR

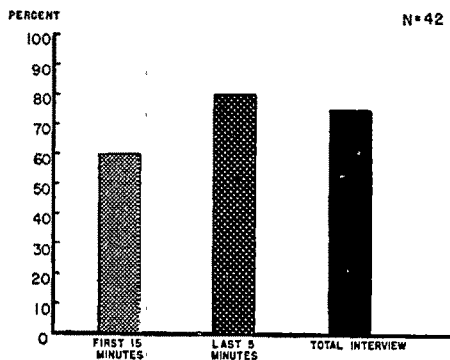


FIG. 9.

interview or for the total interview) the cumulative height of the curve. Similar measurements were made for the interview while the patient was breathing air in the chamber and for the interview while the patient was breathing various low oxygen mixtures. The composition of the air in the chamber was from 21 to 19% O₂, and the CO₂ varied from .5 to .18%. "Low oxygen levels" refers to oxygen levels of 15% and below.

In a series of 28 patients and 14 control subjects a decrease in activity as described by the A-S curve occurred in about 77% of the subjects, when the values for the total interview are considered. Similar changes were observed in 60% of the subjects when the values were calculated for the first 15 minutes of the interview. A slightly higher percentage of individuals (80%) showed a decrease in activity when the values for the last 5 minutes of the interview were taken (Fig. 9).

On comparing patients and control subjects (Fig. 10) the same percentage (75%) of each showed a decrease in activity for the total interview period as described by the A-S curve. The mean decrease for the patients was 1.1 seconds and for the control subjects .65 seconds.

Relation of Activity in Air to Changes at Low Oxygen Levels.—The results of this comparison are presented in Figs. 11 and 12. It can be seen that subjects with high initial activity rates as determined by the A-S value showed greater changes at low oxygen, whereas subjects with initial low activity rate tended to show an increase in activity at low oxygen. All of the 7 subjects with

cated an increase in activity of .5 seconds for the total interview and a slight decrease of .25 seconds for the last 5 minutes of the interview. The same relationship holds for the larger series of 35 patients and 30 control subjects.

For comparison the value of activity alone was calculated from the charts produced by the interaction chronograph and is presented

RELATION OF INITIAL ACTIVITY IN AIR TO DECREASE OF ACTIVITY AT LOW OXYGEN LEVELS

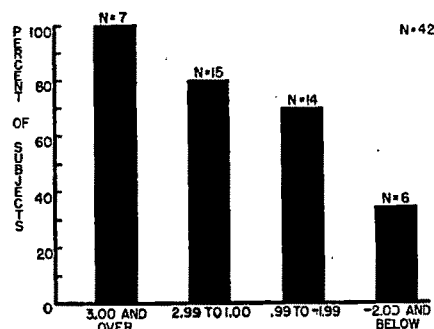


FIG. 11.

RELATION OF INITIAL ACTIVITY IN AIR TO MEAN CHANGES AT LOW OXYGEN LEVELS

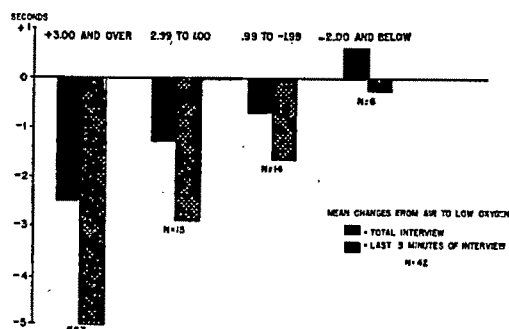


FIG. 12.

activity rates of 3 seconds and over per interaction unit showed a decrease at low oxygen. The mean value for this decrease was 2.5 seconds per interaction unit for the total interview and 5 seconds for the last 5 minutes of the interview. Twelve out of 15 subjects (80%) whose initial values were from 2.99 to 1.00 showed a decrease. The mean change for these 15 subjects was a decrease to 1 second for the total interview and a decrease of 3 seconds for the last 5 minutes of the interview. Ten out of 14 subjects (75%) whose initial values were from .99 to -1.99 showed a decrease. The mean change of these subjects was a decrease of .5 seconds for the total interview and 1.5 seconds for the last five minutes of the interview. Only 2 of 6 subjects, whose initial value was 2.00 and below, showed a decrease at low oxygen. The remaining 4 showed an increase during low oxygen. The mean values for these subjects at low oxygen indi-

as mean activity in seconds per minute for the total interview. The mean activity rate for the patients for the entire interview was 32.6 seconds per minute, which was lower than that for the control subjects. Both the patients and the control subjects showed a decrease in activity at low O_2 (15% and below). This change, however, was greater for the patients than it was for the control subjects (Fig. 13). It was found also that subjects with high initial activity rates in air tended to show greater changes in anoxia than did those subjects whose initial rates were low.

If the change in activity during anoxia is merely a function of the initial activity rate, one would not expect the patients whose initial activity rate in air was lower to show greater changes in low oxygen. This would indicate that a second factor in determining the effect of low oxygen is the disease.

DIFFERENCES BETWEEN MEAN ACTIVITY PER MINUTE IN AIR AND IN LOW OXYGEN

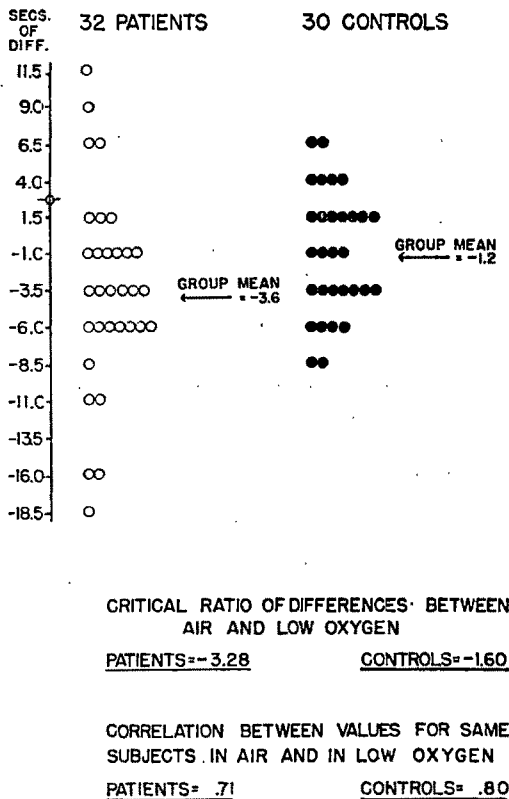


FIG. 13.

Relation Between the Electroencephalogram and Activity.—In an attempt to understand other factors which could play a role in producing the changes in activity at low oxygen, the relationship between the EEG and the activity was investigated. In a series of 15 subjects it was found that at low oxygen levels the subjects who showed the greatest decrease in activity in low oxygen showed little or no change in the EEG, whereas the subjects who showed little change in activity during low oxygen or whose activity rate was increased during low

oxygen showed the greatest changes in EEG. This relationship held whether activity was measured in terms of activity per minute (Fig. 14) or activity per interaction unit (Fig. 15). This relationship, however, did not hold when the oxygen levels between 10.5 and 15% were considered. This would

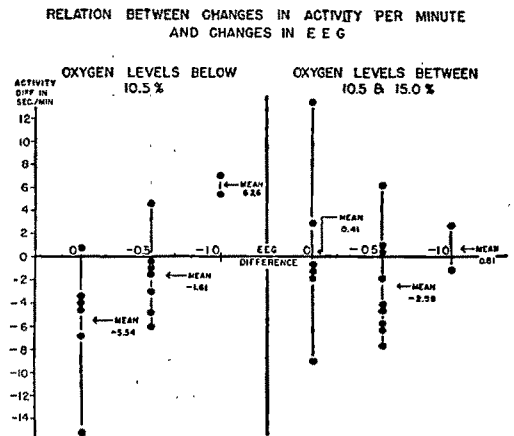


FIG. 14.

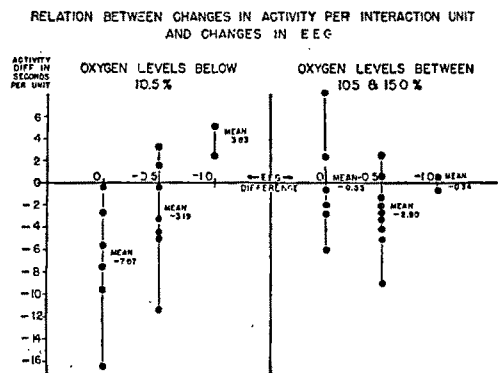


FIG. 15.

indicate that there is a third factor, namely the activity of the central nervous system as measured by changes in cortical potentials which relates inversely to the change in activity.

In an attempt to determine what other factors could play a role in the change of activity during low oxygen, a few experiments were conducted in which changes in the heart rate were measured at various levels of anoxia. These experiments indicated that the individuals whose heart rate was markedly increased during anoxia showed considerable decrease in their activity, whereas the indi-

viduals whose heart rate showed little or no increase during anoxia showed little or no change in their activity. This again would indicate a direct relationship between increase in heart rate, which is an indication of autonomic activity, and a decrease of verbal and gestural activity. Only a few of these experiments have been done to date, and conclusions are necessarily tentative. However, in a previous study (21) it was shown that intramuscular injection of adrenalin caused a decrease in word production which was associated with marked subjective feelings. The present study adds additional weight to the hypothesis that the decrease in verbal and gestural activity is associated with an increase in autonomic activity, resulting in an increased awareness of internal phenomena. This problem is at present being further investigated.

SUMMARY

1. Observations on the effect of breathing low oxygen are reported in a series of 67 patients and 42 controls, in whom changes in central nervous system activity were measured by the EEG and changes in behavior by the interaction chronogram.

2. Most subjects showed a shift in EEG to the slow frequencies during low oxygen. This was more marked and consistent when the CO_2 was less than .3%. There was no difference between patients and controls.

3. A decrease in verbal and gestural activity was found in about three-fourths of the subjects. The decrease was greater for the patients than the controls.

4. Subjects with high initial activity while breathing air showed the greatest decrease as a result of low O_2 . Subjects with low activity rates in air showed slight decreases and, in many instances, an increase.

5. Subjects with marked changes in EEG tended to show an increase in activity.

6. Four factors are discussed as playing a rôle in determining the changes in activity due to low O_2 .

(a) Initial rate of activity.

(b) Diagnosis.

(c) Electroencephalographic changes.

(d) Autonomic activity as measured by heart rate.

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ELECTROENCEPHALOGRAPHIC PATTERNS FROM THE BASE OF THE BRAIN¹

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Recordings of the electrical activity of the brain are conventionally obtained from electrodes placed in various positions on the scalp. Although disturbances deep within the brain may affect the surface area, our present procedure registers mainly cortical activity (1). With the prevailing technique, the true character of the electrical oscillations of deeper tissue is obscured.

The desirability of new electrode placements has attracted a number of workers. Thus, a cisterna magna lead has been described (2), ventricular electroencephalograms have been obtained from animals and human subjects during ventriculography (3), and electrical activity from leads placed in the posterior pharynx has been studied in animals and man (4, 5, 6, 7, 8, 9). Our work has been concerned with this latter technique.

MATERIAL AND METHODS

A group of 17 cases with varying neuropsychiatric complaints was studied. The patients were either hospitalized in the Boston Psychopathic Hospital or attached to the out-patient clinic. Since our attention was directed mainly toward working out an adequate technique and becoming familiar with a variety of basal patterns, we studied a variety of clinical types. These included patients with convulsive disorders (4 cases), psychopaths and behavior problems (3 cases), dementia præcox (3 cases), patients with gross pathology of the brain (3 cases), manic-depressive psychosis (2 cases), anxiety neurosis (1 case), obsessive-compulsive

neurosis (1 case). In this study our attention was particularly directed towards technique, location of electrodes, and characteristics of basal EEGs. We observed the response to light perception, to voluntary hyperventilation, and to injected epinephrine, mechloral and sodium amytal. In addition we had the opportunity to observe several spontaneous larval slow-wave and petit mal discharges in epileptic patients, and in 2 patients the effect of induced convulsions. Three patients with gross intracranial pathology were studied, of which 2 are briefly mentioned.

TECHNIQUE

The electrode used by us is a modification of the one described by Grinker and Serota (5). Instead of a sharply pointed insulated metallic rod which is imbedded in the posterior nasopharynx, we used a copper solder electrode 2×6 mm. connected to an insulated telephone wire $2\frac{1}{2}$ mm. in diameter and about 70 cm. long. The first 15 cm. of the telephone wire are stiffened by means of a wooded applicator stick bound in apposition to the telephone wire by ordinary adhesive. The part inserted into the nose is, therefore, about $2\frac{1}{2} \times 5$ mm. and flexible enough to withstand a moderate degree of bending or moulding to the tissues of the nasal cavity.

The nasopharynx of the patient is first cocaineized with 10% cocaine. The cavity is visualized by means of a nasopharyngoscope, then the lead is inserted firmly against the appropriate anatomical part. Usually the electrode maintains itself without additional support. Both nostrils are plugged with cotton wadding to discourage nasal breathing which tends to introduce artefacts. Following the application of the electrode, an X-ray is taken to determine its exact location and distance from the base of the brain. During the recordings, the nasopharyngeal electrode may be readjusted several times; in general, however, it requires little more care than

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Valuable technical assistance has been given by Marie M. Healey, Senior Technician, Electroencephalographic Laboratory of the Boston Psychopathic Hospital.

electrodes on the scalp. The resistance between the nasopharyngeal lead and a reference point such as the ear lobe is usually around 5000 ohms, which is adequate for good recording.

Upon removal of the electrodes one observes hemoglobin pigment on the contact end. We have had no instances of infection or other serious sequelæ. One patient had a very marked reaction to the cocaineization and insertion of the electrode in the form of pallor, tremors, tachycardia and anxiety, with waves of pallor and tachycardia occurring throughout the experiment. Another complained of distressing pain in the nasopharynx after the test. Three or four patients disliked the procedure and would not submit to a retest.

The placement of the electrode within the nasopharyngeal cavity and the subsequent manipulations and readjustments were done by the nose and throat consultant attached to the hospital (D.M.).

All recordings were done with the patient in the sitting position in a dark quiet room. In addition to the nasopharyngeal lead, electrodes were also placed over frontal, motor, temporal and occipital areas. One channel was usually reserved for recording the EKG through electrodes placed on both infraclavicular regions. The EKG was not necessarily standardized for position of electrodes or amplitude, our purpose being simply to follow the cardiac rate and rhythm and gross changes of wave contour. We attached the cardiac electrodes to the upper thorax rather than the arms in order to eliminate movement artefacts coming from the limbs. In interpreting the basal brain activity, it is almost essential to have a simultaneous record of EKG.

All the electrodes recording from the brain (including the nasopharyngeal electrode) are referred to the interconnected ear leads which are grounded, and the preamplifiers are turned to ground. All EEG tracings were standardized by calibration from a standard signal (50 mv) and by matching simultaneous tracings obtained from identical regions of the head.

LOCATION OF ELECTRODES AND TERMINOLOGY

Grinker (4, 5, 6) has used the term "hypothalamic" lead for an electrode imbedded

in the posterior pharynx. Hoagland *et al.* (7) more cautiously referred to this pick-up as a "region near the hypothalamus." Jasper (10) believes this nasopharyngeal lead is a very diffuse one to many diencephalic and midbrain structures so that one cannot attribute the activity to any particular area.

X-rays reveal that the posterior nasopharyngeal placement is anterior and inferior to the sphenoid sinus and that the distance from the base of the brain varies primarily with the size of the sphenoid sinus. We term this posterior nasopharyngeal lead the *basal sphenoid lead* (S lead).

We also used a placement more anteriorly and higher up in the nasal cavity in a position corresponding to the sphenoid-ethmoidal recess. This placement we designate as the *basal sphenoid-ethmoidal lead* (S-E lead).

The sphenoid lead (S lead) is in the general vicinity of the diencephalic and midbrain structures, postero-inferior frontal cortex and medial temporal cortex. The sphenoid-ethmoidal lead (S-E lead) is in the general vicinity of the posterior inferior frontal area. A comparison of S lead with S-E lead reveals the following: The S-E lead is more anterior and higher up in the nasal cavity, closer to the base of the brain and, therefore, more localized in its pick-up than the S lead. The S-E lead lies under the posterior end of the cribriform plate. Recordings from the S-E lead are less subject to both cardiac and respiratory artefacts than the S lead. (See X-rays for location of basal lead.)

CHARACTERISTICS OF BASAL ELECTRO- ENCEPHALOGRAM

Fig. 1 shows recordings of brain activity from various scalp and basal leads in 3 different cases. The EKG (unstandardized) is also shown for each patient.

The basal EEG yields a distinctive, characteristic pattern. The pattern is usually of lower voltage than the cortical pattern, less rich in sinusoidal or alpha-type waves, and contains a great deal of irregular activity with random slow waves or baseline sways. In a heterogeneous group of neuropsychiatric cases, we most often found a low voltage irregular pattern with random slow waves. Although the basal tracings show many similarities to tracings obtained from

the cortical (scalp leads) the two are readily differentiated. Activity from the base varies from one individual to another as much as cortical tracings. In some individuals the basal activity shows quite a departure from the characteristics of the cortical rhythms. In other individuals the basal activity reflects most of the dominant characteristics of the cortical rhythm. In many cases the

actively difficult to demonstrate in basal EEGs because most individuals have shown little alpha activity in recordings from this lead. In this respect, our records are in agreement with those of Hoagland *et al.* (7) but are not in accord with those of Grinker and Serota (5) who report an intensification of alpha activity in the basal lead upon visual stimulation.

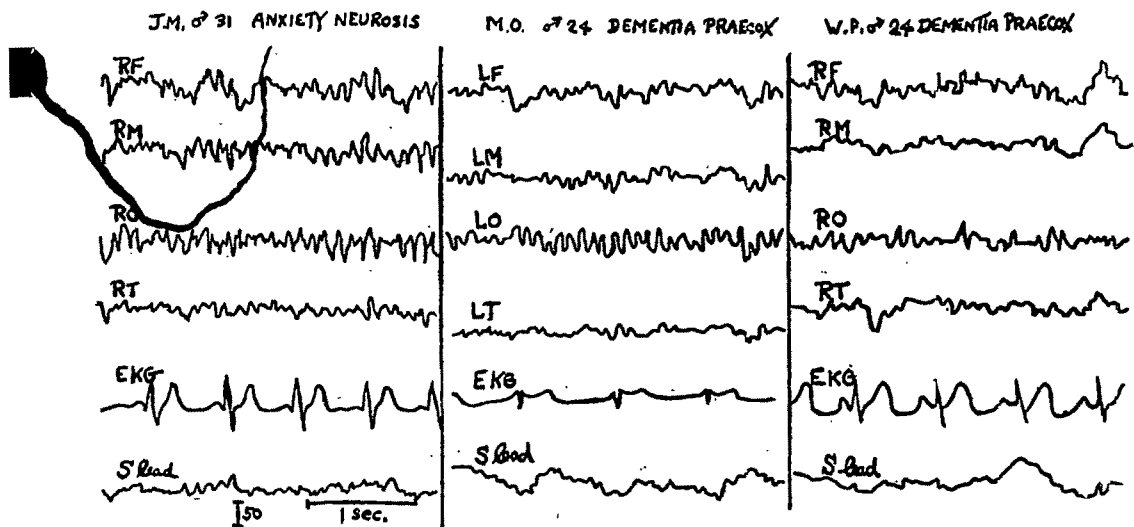


FIG. 1.—Simultaneous cortical leads, basal leads and EKGs on three different patients. The upright line is 50 microvolts. The horizontal line is one second.

J. M., age 31, suffered from anxiety neurosis. The cortical leads showed fairly good quality normal frequency sinusoidal (alpha-type) rhythm. The basal lead is less rich in alpha waves and demonstrates a good deal of low voltage irregular activity.

M. O., age 24, is diagnosed dementia praecox. He showed smooth alpha-type rhythm in the occiput and minor irregularities elsewhere. The S lead demonstrates low voltage alpha-type rhythm with sways secondary to the heart beat.

W. P., age 25, is diagnosed dementia praecox. The basal lead shows an irregular low voltage pattern with tiny spikes synchronous with the QRS complex of the EKG.

basal activity resembled most the activity obtained from the temporal areas. In epileptic patients, we found, as a rule, much greater amplitude than in the non-epileptic group, with discharges of abnormal frequency activity appearing in both cortical and basal graphs, but not necessarily simultaneously.

The effect of opening the eyes was suppression of the alpha-type activity in favor of low voltage random activity which promptly disappeared when the eyes were closed. In our experience, the basal rhythm behaves in a similar way to the cortical rhythm in response to visual stimulation. The effect of visual stimulation is rel-

The effects of overbreathing on the basal and cortical EEGs were compared. In general the two curves tended to parallel each other—that is, a large “build-up” in cortical activity was usually accompanied by a large “build-up” in basal activity. However, the degree of change from the resting pattern was not always the same; there were instances in which the basal pattern showed greater frequency shift and amplitude change than did the cortical pattern and vice versa. Episodic slow-wave discharges appearing in cortical patterns during hyperventilation were usually, but not always, accompanied by similar slow-wave discharges in the basal pattern. In other words, the stress of hyper-

ventilation affected both parts of the brain, but each could respond, to a degree, independently of the other.

Fig. 2 shows basal activity from a lead placed in relation to the sphenoid sinus (S lead) compared with activity from five conventional scalp areas. The patient is a 42-year-old man, who recovered from an attack of manic-depressive psychosis with electric shock treatment. The response to hyperventilation at 40 and 80 breaths is illustrated. High voltage episodes are seen arising from

The cortical EEG always showed a lesser change than the basal EEG. Increase in voltage of preexisting alpha-type waves, slight increase in frequency, and introduction of slow waves occurred.

The clinical effects included fear, palpitation, pounding in the head, pallor and cyanosis. The EKG revealed varying degrees of cardiac slowing and extra-systoles. In general, the magnitude of the clinical response paralleled the EEG changes, particularly the changes in the basal pattern. The least

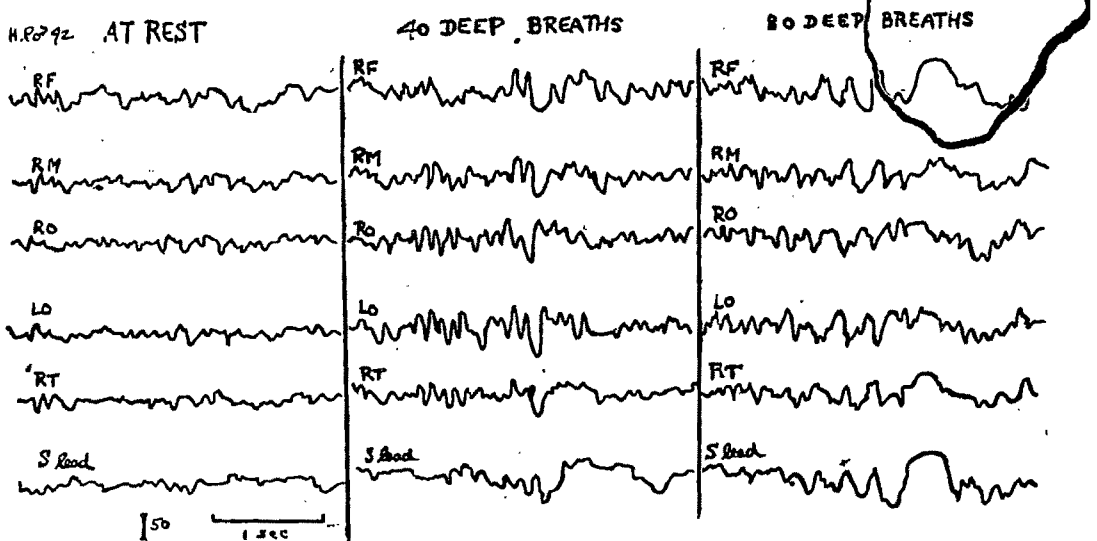


FIG. 2.—Effect of overbreathing on cortical and basal rhythm. A large “build-up” is seen in all leads; the cortex and base appear to respond in a similar manner to the physiological stress of hyperventilation (see text).

both cortex and base of brain at 40 and 80 deep breaths. In this case the physiological stress imposed by overbreathing evoked similar responses from cortex and base of brain.

PHARMACOLOGICAL STUDIES

The effect of injected drugs was studied with the following results:

(a) *Epinephrine* .05 to 0.1 mg. was given intravenously to 6 different patients and the clinical, electroencephalographic, and electrocardiographic response was noted. The basal EEG showed intensification of alpha activity (increase in amount and amplitude) or introduction of 4-7 per second slow-waves. The effect reached its height in 1-2 minutes and subsided rapidly thereafter. The longest discernible response was 8 minutes.

marked effects occurred in anxiety neurosis (1 case), schizophrenia (3 cases); the most marked effect in a case of psychopathic personality.

(b) *Sodium amytal* $7\frac{1}{2}$ grains was given intravenously to 2 patients. Fast activity promptly appeared in all leads, 16-24 per second frequency, and of high voltage. The effect reached a maximum in about 5 minutes and subsided gradually up to 15 minutes. In one case, the amplitude was greatest in frontal leads, least in occipital and basal leads. In the other case, the amplitude was greatest in basal and motor leads. During drowsy spells, a great deal of irregular slow activity broke into both cortical and basal patterns.

(c) *Acetylbetamethylcholine* (mechoyl) 10 mg. was given subcutaneously to one case.

Marked flushing, perspiration and quickening of heart rate occurred. A great many irregular low and medium voltage slow waves came in at 1 minute, rose to a maximum at 4-6 minutes and subsided by 15 minutes. The basal tracing showed much greater response than did the cortical tracings

EPILEPTIC PATIENTS

The basal and cortical EEGs of epileptic patients were studied. They were characterized by recurrent episodes of abnormal slow-wave activity of varying severity appearing both at rest and during overbreathing. These were obtained from both superficial and basal leads. In general, the cortical leads showed changes of greater magnitude than the basal leads. The slow-wave episodes were usually but not necessarily synchronized from the 2 areas. During overbreathing large build-ups were obtained from all leads, most marked in cortical (superficial) leads.

Several larval spike and wave discharge were noted. The basal discharge was in one instance almost negligible as compared to the waves in the scalp leads, and in others the discharge from the base appeared distorted or flattened (Fig. 3 at 20 deep breaths). In this case the basal discharge definitely lagged behind that from the cortex (scalp) (Fig. 3).

Induced Seizures.—In two cases, unconsciousness with short tonic-clonic convulsions was induced by compression of the carotid arteries bilaterally. High voltage slow waves, 2-3 per second frequency, appeared from all cortical leads just before and during the seizure. The basal lead demonstrated irregular slow-wave activity 4-7 per second frequency of medium to low voltage.

PATIENTS WITH GROSS PATHOLOGY OF THE BRAIN

Two patients with gross pathology of the brain are briefly reported.

Case 1 was a man of 37, subject to recurrent depressions, the first of which appeared following the accidental discovery of diffuse abnormal calcification at the base of his

brain. His admission to the Boston Psychopathic Hospital was occasioned by deepening depression, tension and anxiety. Physical and neurological examinations were negative. Psychometric examination disclosed definitely abnormal psychological performance consistent with brain damage. *E.E.G.* revealed continuous diffuse slow-wave activity of 6-7 per second frequency from all leads. Upon overbreathing, a large build-up appeared diffusely, most marked in the basal lead. Triangulation localization using basal lead with motor and occipital leads for each hemisphere disclosed maximum disturbance deep within the brain (a great deal of phase reversal activity appeared localizing in the deep lead).

Case 2 was a 43-year-old male who noted acute difficulty with object perception some three weeks before admission to the hospital, coupled with nausea, vomiting, and dizziness. 1½ weeks before admission, he suffered from frontal headaches and staggering gait. Examination revealed inconstant left homonymous hemianopia without papilledema or other positive neurological signs. Lumbar puncture showed a total protein of 82 mg. % and increased initial pressure (250 mm. of H₂O). The clinical diagnosis was that of an expanding intracranial lesion of undetermined localization.

On *EEG examination* the patient demonstrated clear-cut asymmetry between the two hemispheres particularly in the occipital aspects. The right occipital rhythm was disorganized, alpha rhythm was suppressed and random low voltage slow waves appeared from this area. No significant abnormality was noted in the recordings from the deep lead. Localization by monopolar and triangulation techniques fixed the disorder in the right occiput. The EEG data indicated right occipital focal pathology without deep spread. This conclusion was verified by operation.

In the first case, the EEG was helpful in (1) establishing diffuse abnormality and (2) localizing the site of maximum abnormality to the base of the brain. In the second case, the EEG was helpful in (1) establishing a cortical focus and (2) demonstrating by means of the deep lead that the disturbance had not spread to the base of the brain.

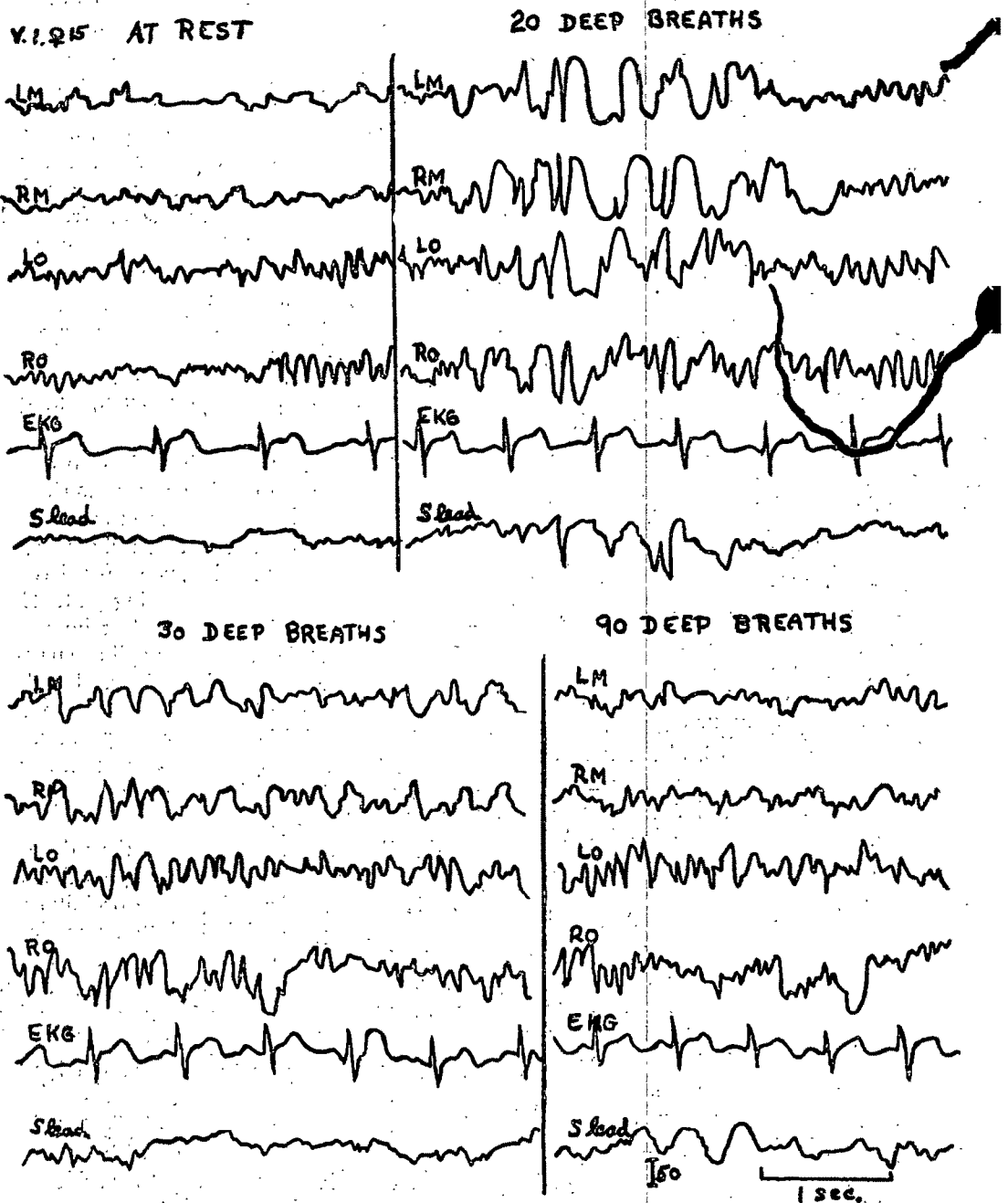


FIG. 3.—Effect of overbreathing on cortical and basal EEG and upon EKG of an epileptic patient. At 20 deep breaths, a clear-cut petit mal outburst appeared from all cortical leads and also from the basal lead. There were no clinical manifestations of petit mal at this time. It is interesting to note that the configuration of the discharge from the basal leads was somewhat different from that of the other leads. The alternate dart and dome (which is closest to the classical form in the motor leads) appears in quite distorted and less emphatic form in the basal lead and appears to be delayed in time of onset when compared to the paroxysms in the cortical leads. Fig. 3 also shows at 30 deep breaths an episode of slow-wave activity of 4-6 per second frequency appearing in both motor leads but not from occipital or basal leads. At 90 deep breaths, slow undulations at 3 per second were noted from the basal lead but not from cortical leads.



FIG. 4.—Lateral view of skull with basal lead *in situ*. The lead is anterior and below the sphenoid sinus (S lead).

The basal lead technique opens up possibilities in the localization of gross pathology at the base of the brain. The sphenoidal lead (S lead) would probably be best in the detection of abnormalities in and around the third ventricle, whereas leads placed more anteriorly, we believe, would be helpful in localization of subfrontal disorders.

ARTEFACTS FROM THE BASAL LEAD

Even a short experience with EEGs from the basal lead convinces one that interpretations must of necessity be conservative because of the frequency of artefacts. Blinking, swallowing artefacts, movement artefacts, and respiratory artefacts are common in the basal lead. It is difficult to induce a slowing of the basal record, often by the use of drugs, but the wave forms are easily distorted by artefacts. The regular period and time base, but the wave forms are such that it is necessary to use EKGs for proper appraisal. Respiratory artefacts make satisfactory recording impossible.

DISCUSSION

Part of the brain is recorded from the basal lead? This depends primarily upon the position of the lead, the distance from the base of the brain, and the character of the conducting medium through which the electrical oscillations pass. The farther away the lead is from the base of the brain, the more diffuse is the recording. The distance of the basal sphenoid lead from the base of the brain depends largely on the size of the sphenoid sinus. By actual measurement, the distance of the basal sphenoid lead from the clinoid processes is about 3-4 cm., the distance of a sphenothmoidal lead from the orbital surface of the frontal bone is about 1½-3 cm.

As yet, we have no assurances that the basal sphenoid lead records from the hypothalamus. Hoagland(8) reports that the electrical activity of the hypothalamus as recorded from an electrode placed directly

in the hypothalamus in dogs is very similar to that obtained in man from a sphenoid lead. However, in the same communication he reports that the activity from the anterior hypothalamus is considerably different from that of the posterior hypothalamus in the same animal although the distance between the electrodes is only a centimeter or so. The proximity of inferior frontal and medial temporal cortex to the basal lead suggests we may be recording from these structures as well as diencephalic tissue. The basal activity appears to us as a variable but complex composite of electrical oscillations from a variety of structures, each lending their share to the final wave picture.

By electrical stimulation directly through the basal lead, Grinker(5) obtained alteration of the basal EEG together with dilated pupils, perspiration, rise in blood pressure, anxiety—a syndrome suggesting involvement of centers integrating autonomic patterns. However, it is possible (as Hoagland has stated) that the hypothalamic centers were secondarily detonated by the electrical stimulus. We have seen similar autonomic discharges without electrical stimulation, simply by cocainization of the nasopharynx and instrumental manipulation about this area.

Although we are ignorant of the precise structures involved in the basal recording or the relative rôle they play in the finally recorded pattern, nevertheless the basal lead gives important information concerning the activity in a remote area and as such becomes an important adjunct in the examination of the nervous system. The basal regions appear to respond to a variety of stimuli in the same general way as does the cortex. We have shown, however, that the magnitude of the response of the two areas may differ and that the activity of one is not dependent on the other.

Jasper(10) reported on one case of epilepsy with basal lead studies showing large slow waves from the base of the brain (but no cortical abnormalities) at the onset of an epileptic attack, when the patient felt he was "sliding towards a spell." Hursh(11) obtained petit mal discharges from the two hemispheres simultaneously despite almost complete section of the corpus collosum and

believes petit mal attacks originate in the thalamus or subthalamus. Ostrow and Ostrow(12) postulate a predominantly subcortical disturbance in all cases of epilepsy. In the epileptic discharges which we observed, spontaneous or induced, the cortical pattern generally showed more pronounced alterations than the basal pattern and in some instances at least the basal pattern lagged behind the cortical patterns. However, relative independence of the two areas was also observed. In schizophrenic patients, Hoagland(7) found that delta surges elicited by emotionally charged verbal stimuli appeared first in recordings from the base, and after a lag of 3-4 sigma were found in recordings from the occiput.

To autonomic stimuli, whether sympathico-mimetic (epinephrine) or parasympathico-mimetic (mecholy), the changes in the basal activity were much more marked as regards both frequency and voltage than in the cortex. The response to epinephrine, both subjectively and objectively, varied considerably in our six cases. In studies with the hypothalamic lead, Grinker(6) found that a group of schizophrenic patients were less responsive to a variety of stimuli including epinephrine, than non-schizophrenic patients. We obtained our greatest response in a hostile, aggressive psychopath who gave the impression of being "set to explode," and the least response in anxiety neurosis (1 case) and dementia præcox. A marked response was obtained from a manic-depressive patient recently treated with electric shock whose EEG was considerably altered by the treatment. We are inclined to believe that electric shock treatment rendered the patient more reactive to epinephrine.

The value of basal electroencephalographic recordings is shown not only in studies of epileptic discharges and the changes induced by acute pharmacological stresses, but also in the study of gross brain pathology. The localization at the base of the brain can be somewhat refined by shifting the basal lead from one area to another, or inserting two leads in different localizations. We have obtained satisfactory recordings not only from the sub-sphenoid area but also from anterior and posterior subfrontal areas.

SUMMARY

Electroencephalographic recordings from the base of the brain give valuable supplementary information to data obtained from conventional scalp recordings. Various locations of the deep lead are possible—sub-sphenoid, sphenoid-ethmoidal or subfrontal.

Several varieties of basal patterns are described and illustrated. The effect of visual stimulation, overbreathing, drugs, spontaneous and induced electrical discharges in epileptics, and of gross intracranial pathology is described.

In general the basal rhythm response to various stimuli is similar to that of the cortical (superficial) rhythm. Visual stimulation flattens the basal rhythm and blocks alpha activity. Hyperventilation causes a build-up in size of potentials and a slowing of rhythm, which may be greater than that of the cortex. Autonomic stimuli (epinephrine and mecholy) appear to affect base more than cortex. Sodium in amounts sufficient to produce intense but not sleep, results in high voltage waves in base as well as cortex.

Electrical paroxysms typical of epilepsy usually are more pronounced at the base than at the base.

The basal lead is a valuable adjunct in the localization of gross intracranial pathology.

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A STUDY OF THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY IN CLINICAL PRACTICE

WITH NOTES ON THE CORNELL INDEX¹

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Because of its intricate subjectivity, psychiatry has until recently been able to lean only restrictedly on objective laboratory aids long essential to clinical medicine generally. For this reason, those conversant with the intangibilities of psyche and soma have eagerly explored potentialities in the psychometric testing of personality components.

Revolutionary psychiatric requirements of World War II stimulated and gave marked impetus to inquiry regarding this relatively new instrument; for the screening, evaluation, reassignment and disposition of large masses of men within the military organization could not be accomplished through the individual handling traditional in clinical practice. Numerous valuable testing methods have been devised, and as Dr. Karl Menninger has stated (17), "the practice of psychiatry without the assistance of modern psychological testing is as old fashioned and out of date as would be the practice of orthopedics without the x-ray."

Among the most ambitious attempts to objectify the data of clinical psychiatry is the Multiphasic Personality Inventory developed by Hathaway and McKinley at the University of Minnesota. In a series of publications (6, 7, 8, 13, 14, 15, 16,) they have described in detail the compilation and validation of the test using manifold clinical media and types of controls. The test has been widely introduced to the Armed Forces, where it has been experimentally utilized in a wealth of case material, and it is receiving mention in neuropsychiatric literature with increasing frequency.

The test consists of 550 statements, each printed separately on a small card. The patient is requested to read each statement, and then to place the card under one of three headings, "true," "false," or "cannot say"

accordingly as the statement applies to him personally. Some statements are couched in positive terms, some negative, and some are of no scorable significance. The responses are scored and the results recorded in 9 clinical diagnostic categories; namely, hypochondriasis (Hs), depression (D), hysteria (Hy) psychopathic deviate (Pd), masculine-feminine traits (Mf), paranoia (Pa), psychasthenia (Pt), schizophrenia (Sc), and hypomania (Ma).

The results of each individual test are reported in 12 separate categories. There are, in addition to the 9 above mentioned, 3 categories which serve as checks on the validity of the test. The "cannot say" answers are counted and scored to form an index of indecisiveness or carelessness; 15 very obvious, straightforward statements are scored as "lie" responses (L score); 64 miscellaneous, otherwise unscored statements are used as an index of random answers, carelessness, or possible clerical errors (F score or validity score). The raw scores for all the 12 scales are changed quantitatively to a standard score in which 60 is doubtful and 70 or over is probably pathological.

The purpose of the Minnesota Multiphasic Personality Inventory (hereafter M. Inventory) is to define the more important clinical phases of personality. This is accomplished by evaluation both of the symptoms and of the underlying personality structure. Some statements such as, "My mouth feels dry almost all the time," and "Much of the time my head seems to hurt all over," are strictly symptomatic, while others inquire into attitudes toward parents, society, sex, etc. Such valuable features as are characterized by Murray's personality delineations (19) and symptom catalogues of the Cornell Indices (24, 25) are combined in the test.

Indications for conducting the investigation reported here were several: First, a more extensive study of the individual appli-

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cation of the M. Inventory is necessary. Most of the statistical material of the authors and others is concerned with group comparisons rather than individual test results. That 25 hypochondriacs make an average score of 74.2 on the hypochondriasis (Hs) scale(13) is interesting information; but it is desirable to enumerate those individuals making normal scores below the critical level of 70, those making significantly high scores on some of the remaining 8 scales, and those patients in other diagnostic categories also making high scores on the Hs scale. The clinician does not see patients in pre-classified groups, and must be able to interpret individually the results on each M. Inventory record.

Second, the M. Inventory has not previously been applied to the largest single group of psychiatric disorders, the anxiety neuroses. There is no scale in the M. Inventory for anxiety, and none of the papers published by the authors or others have signified that research relative to this obvious defect has been undertaken. Clinical use of the test will be seriously limited if all patients with anxiety are to be ignored. The authors do state(8) that additional scales will be constructed from time to time from the original 550 questions, but it is doubtful that a satisfactory scale for measuring anxiety could be framed on the same basis as were the 9 now in use. The peculiar affective drive termed anxiety permeates most psychiatric reactions, and is particularly prominent in all the subdivisions of neurosis. It is indeed possible that a scorable scale of characteristic statements discretely defining a pure anxiety type of personality could not be separated from the multiple symptomatological expressions of anxiety.

Third, it appears expedient to validate the authors' results. They state that several of their scales are only tentative because insufficient cases were used in forming them. It is advisable, if the test is to be of protean application, to evaluate it under conditions dissimilar to those under which the authors judged it(9).

Fourth, extension of the M. Inventory to all medical problems in which personality equations and functional factors figure, is desirable. Ruesch and Bowman(16) have employed the test for evaluating post-traumatic

headache; Abramson(2, 3) has applied it to minor deviations in "normal" officer personnel and to normal persons after ingestion of alcohol; Michael and Buhler(18) have tried it in 90 difficult diagnostic problems. The large numbers of enuretics, epileptics, alcoholics, somnambulists, migraine sufferers, etc., in the series reported here suggested excellent material for attempting to widen the scope of usefulness of the M. Inventory.

Fifth, the possibility of repeating the test at intervals to measure progress of a patient under treatment or to aid in prognosis should be investigated. Whether or not such a retest would be valid has not been studied to date.

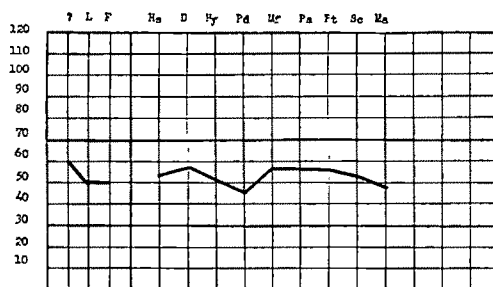


FIG. 1.—Minnesota multiphasic personality inventory profile chart.

This profile is taken from the Minnesota Multiphasic Personality Inventory, published by the University of Minnesota Press. The production of the test is now in the hands of the Psychological Corporation.

PATIENT MATERIAL

The M. Inventory records in this report were obtained from 500 United States Army enlisted personnel. One hundred controls were chosen whose age and duty assignments were comparable to those of the 400 patients. The only specifications for inclusion of a man in the control series were that he be performing adequately in his military assignment and at the time be receiving no form of medical treatment. Of the 400 patients tested, results for 84 were discarded because of incompleteness, a doubtful diagnosis, or technical error; consequently, the findings are based on the scores of 316 testees.

Entirely normal records were obtained from 78 of the 100 control subjects; *i. e.*, all 9 diagnostic scores were below 70. A sample normal profile is shown in Fig. 2.

Each of the remaining 22 records, contained at least one score of 70. Twelve had only one score over 69, six had two scores over 69, three had three scores over 69, and one had four scores over 69. The abnormalities present were not marked since 13 were borderline (between 70 and 73), and only 4 of the 22 had a score over 76. The 10 patients making two or more high scores were interviewed, and definite evidence of anxiety was found in each. Since the intention was not to discover 100 normal Minnesota records, but to differentiate between 100 non-complaining soldiers and a group voicing symptoms; the 22 mildly abnormal records were retained in the control group. Separate studies of the 78 normal and of the 22 abnormal records revealed no significant qualitative differences. Hysteria (Hy) and hypomania (Ma) received the highest scores in each group, roughly in the same percentages.

DIAGNOSIS

The authors state that the identifying diagnostic score may not be the highest of the 9 made by the testee, but that it should rank among the highest three or four. The statistics presented here will illustrate complete agreement with that observation, particularly as applied to individual records rather than to group studies. Chart I, with the diagnostic categories comprising the ordinate, and the abscissa marked in percentages, graphically represents the potential value as a diagnostic aid of the four highest scores in an M. Inventory record. Only 20% of the records scored highest in hypochondriasis (Hs) (first column), but 100% had Hs as one of the four highest scores. Pd was the highest score on the record in only 14% of the psychopathic deviations. Among the four highest scores, however, Pd occurred in 86% of the records.

M. Inventory results for the 100 controls and 7 of the 9 patient categories appear in Table I. Paranoia and hypomania are not represented in the 316 patients reported here. All figures are percentages. In the hysteria column, for example, 54% of the 15 records showed hysteria (Hy) the highest of the 9 scores, 18% scored highest in depression (D), 18% were highest in hypochondriasis

(Hs), and 9% were highest in psychasthenia (Pt). In comparison the lower half of the Hy column shows that 91% of the records included Hy among the first four scores, and

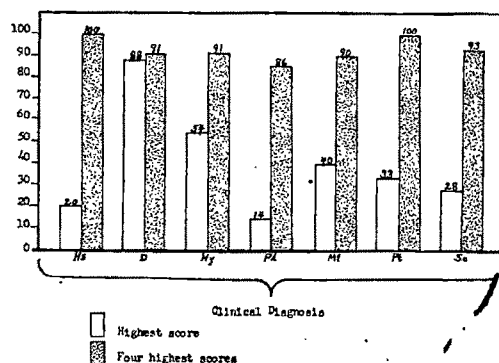


CHART I.—Percentage of cases in which M. Inventory diagnosis agrees with clinical diagnosis. Comparison of highest and four highest M. Inventory scores within each clinical category.

TABLE I
COMPARISON IN EACH CLINICAL DIAGNOSTIC CATEGORY BETWEEN THE HIGHEST AND THE FOUR HIGHEST SCORES ON THE M. INVENTORY

		Clinical diagnostic categories							
		Controls	Hs	D	Hy	Pd	Mf	Pt	Sc
Number of cases.....		100	10	31	15	28	10	6	17
Highest score M. Inventory	Hy	D	D	Hy	D	Mf	Pt	Sc	
	27	60	88	54	50	40	33	28	
	Ma	Hs	Hy	D	Pd	D	D	D	
	25	20	6	18	14	30	33	28	
	D	Hy	Sc	Hs	Sc	Hy	Hs	Hy	
Four highest scores M. Inventory	11	20	6	18	14	20	17	21	
	Pd	..	..	Pt	Hs	Pt	Sc	Pd	
	9	..	..	9	7	20	17	14	
	Hy	Hs	D	Hy	Pd	Mf	Pt	Sc	
	73	100	97	91	86	90	100	93	
Four highest scores M. Inventory	D	D	Hs	D	D	D	D	D	
	59	80	71	91	72	80	84	79	
	Ma	Pt	Pt	Hs	Sc	Hy	Sc	Pt	
	57	80	58	82	57	50	57	64	
	Hs	Hy	Sc	Mf	Hs	Hs	Hs	Hs	
Four highest scores M. Inventory	43	80	58	45	50	50	50	57	

All M. Inventory figures are percentages.

91% included D among the first four. The clinical diagnosis of the 117 patients detailed in Table I was discovered among the highest four scores in 92% of the records.

Depression was most successfully verified by the M. Inventory, inasmuch as 88% of 31 clinically classified depressives scored highest on the D scale. It is not surprising

that a subjective tool such as the M. Inventory should accurately define an exquisitely subjective experience like depression. The success of the test in mirroring affective depression is exemplified by the high D scoring on test results for hypochondriasis, hysteria, and several other categories.

In this connection, the inadvisability of utilizing the M. Inventory as a substitute for clinical psychiatric knowledge in making diagnoses should be emphasized. Hathaway and McKinley do not state such an aim for their test, yet it has been criticized for failing to coincide with the clinical diagnosis (5, 18). D was the highest score attained by 161 (51%) of the total 316 cases; however, only 31 (10%) of the patients were clinically diagnosed neurotic depressives. It follows

TABLE II

PERCENTAGE OF PATIENTS SCORING 70 OR OVER ON THE APPROPRIATE M. INVENTORY SCALE.
COMPARISON OF 3 STUDIES

Investigator	M. Inventory Scale	
	Hs	D
Hathaway and McKinley.....	76	68
Leverenz	96	93
Present study	100	97

All figures are percentages.

that of every 100 patients scoring highest on the D scale only 20 will be primary depressives. Similar results were observed relative to hypochondriasis (Hs), hysteria (Hy), psychasthenia (Pt), and schizophrenia (Sc). Twenty-two (8%) records were scored highest on the Sc scale; notwithstanding only 17 (5%) were schizophrenic by clinical definition.

Hathaway and McKinley obtained an over-all correlation of 60% between clinical diagnosis and M. Inventory diagnosis. The 76% correlation in Table I can be explained by a lower incidence of normal records in this survey; that is to say, the proportion of the patients being studied that were subject to correlative scrutiny was increased.

Table II compares results reported by Hathaway and McKinley (7, 13), by Leverenz (12), and by this investigator. The first group of testees consisted of civilians, and the two latter groups of military personnel. The appreciably higher percentage of abnormal records among the service men might

be attributable to the acute stresses of military environment under which the tests were taken.

ANXIETY NEUROSES

The application of the M. Inventory to the anxiety states proved to be the most stimulating aspect of this study. Although the M. Inventory does not record anxiety *per se*, it implies some anxiety by measuring several abnormal defenses against it, such as hysteria

TABLE III

ANXIETY NEUROSES

COMPARISON IN EACH DIAGNOSTIC SUBGROUP BETWEEN THE HIGHEST AND FOUR HIGHEST SCORES OF THE M. INVENTORY

		Diagnostic subgroups					
		Controls	Free anxiety	Combat anxiety	Neurasthenia	Gastric fixation	Headache
Number of cases.....		100	54	28	6	9	9 122
Highest score M. Inventory	Hy	D	D	D	D	D	D
	27	40	43	33	45	45	49
	Ma	Hs	Hs	Hy	Hs	Hs	Hs
	25	29	14	33	45	22	21
	D	Hy	Hy	Hs	Hy	Hy	Hy
	11	15	14	17	10	11	15
	Pd	Pt	Pt	Ma	..	Sc	Pt
	9	6	7	17	..	11	5
	Hy	D	D	D	D	D	D
	73	90	81	83	79	79	86
Four highest scores M. Inventory	D	Hs	Pt	Hs	Hs	Hs	Hs
	59	90	70	83	68	56	86
	Ma	Hy	Hs	Hy	Hy	Hy	Hy
	57	70	67	83	44	56	63
	Hs	Sc	Sc	Pt	Pt	Pt	Pt
	43	60	53	33	33	44	51

All M. Inventory figures are percentages.

and psychasthenia. As shown in Table III, 122 patients were classified anxiety neuroses and subdivided for statistical analysis under five headings. The 54 "free" anxiety patients exhibited predominantly autonomic symptoms such as palpitation, dyspnea, dizziness, hyperhidrosis, tension and insomnia, and lacked more fixed somatization. The 28 post-combat anxiety states suffered anxiety, tension, irritability and autonomic instability which began during combat and which persisted to a disabling degree for at least four months after the last combat experience.

The neurasthenics were carefully chosen as conforming to the classical picture, with fatigue predominant. The groups with headache and with gastrointestinal fixation experienced sufficient anxiety and tension to exclude them from hysteria, early schizophrenia, or other clinically diagnosed categories. The remaining 16 of the 122 patients presented pictures, one or two patients to each, of neurocirculatory asthenia, arthritic pains, enuresis, alcoholism, etc.

This breakdown, as revealed in the test score percentages of Table III, disclosed a remarkable similarity in most of the subgroups. D was most frequently the high score in all the columns, and Hs was second except in the neurasthenia column. Hy was usually third highest. Both quantitatively and qualitatively results for most of the subgroups closely corresponded to total results for the anxiety group, and the M. Inventory substantiated clinical judgment which grouped these several symptomatic variants under the single heading of anxiety neuroses.

N, P, A, AND AV SCORES

The fact that the M. Inventory record is composed of 9 separate scores suggests manipulating and combining them in various ways. Of the possible combinations, two have been found eminently practicable. Hathaway and McKinley noted that high scores on the first three of the M. Inventory categories, Hs, D, and Hy, are often concurrent in the neuroses. Ruesch and Bowman, in their post-traumatic studies, totaled these three scores to make a neurotic (N) score. The latter also totaled the paranoid (Pa), psychasthenic (Pt), and schizophrenic (Sc) scores to obtain a psychotic (P) score, and found noteworthy clinical differentiations between groups of patients with high N and P scores.

Although it might be a splitting of nosologic hairs so to speak, the term neurotic score (N) for this total of Hs, D, and Hy would seem not completely applicable. Many neurotics (conversion hysterics, psychasthenics, and neurasthenics) do not produce high N scores while some schizophrenics and psychopaths do. This study of anxiety neurosis (Table III) identifies the highest score as Hs, D, or Hy in 85% of the records.

Although anxiety is generally accepted as common to all neuroses, it is an integrant of many other reactions such as early schizophrenia as well. It is hypothesized that compositely hypochondriasis, depression and hysteria in the M. Inventory measure anxiety, and the combined score of these three categories will hereafter be called the anxiety score (A score).

The average score of the 9 scales will be designated the Av score. Interpretation of the individual M. Inventory record is not measurably facilitated by utilizing this mean since it is less selective than assays already discussed; but if abnormal, *i. e.*, 70 or above, it unexceptionally signifies major pathology spread among several scales. By computing the Av score alone, the M. Inventory might be employed as a screening questionnaire or psychosomatic index. Numerous such interview procedures were applied in military neuropsychiatric examinations during the war with varying reports of satisfaction.

CORNELL INDEX

Among the more successful of these psychosomatic inventories is the Cornell Index (24, 25). Composed of 92 questions, it can be administered in ten minutes and scored in one, and thus it is markedly time saving. The 92 inquiries concerning fears, inadequacy, moods, psychosomatic symptoms, sensitivity and psychopathic traits are printed on one sheet with "Yes—No" opposite each. The testee simply circles the appropriate response. Each question has a value of one. Scores of 0-12 are normal, 13-22 mildly abnormal, 23 or above moderately severe or severe. The aim of the test is to detect individuals with serious personality problems, not to attempt a diagnosis.

In conducting a comparative study, 126 miscellaneous cases were tested by the M. Inventory and the Cornell Service Index (C.S.I.). The number of patients to each clinical diagnosis was as follows:

4	Hypochondriasis
6	Psychasthenia
20	Depression
8	Hysteria
54	Anxiety
6	Schizophrenia
2	Hypomania
2	Migraine

- 2 Alcoholism
- 6 Psychopathic deviate
- 6 Enuresis
- 10 Epilepsy

The Av score, the A score, and the number of scores over 70 of the M. Inventory (70 score) were selected as results adaptable to a comparison with the score of the C.S.I. For collation with the C.S.I. divisions of normal, mild and severe, the Av and A scores were evaluated to make below 60 normal, 60-69 mild, and 70 or over severe. For parallelism in interpreting the 70 score, 0 was considered normal, 1-2 mild, and 3 or more severe.

Table IV gives the percentages of agree-

TABLE IV

COMPARISON OF DEGREE OF SEVERITY IN PERSONALITY IMPAIRMENT SHOWN BY C.S.I. AND M. INVENTORY TEST RESULTS ON THE SAME PATIENTS (126 CASES)

	Degree of severity	Percentage of cases
Av score and C. S. I.	Same	64.6
	Av greater	10.7
	Av lesser	24.7
70 score and C. S. I.	Same	74.0
	70 greater	16.9
	70 lesser	9.1
A score and C. S. I.	Same	71.4
	A greater	15.9
	A lesser	12.7

ment and disagreement between the patients' records from the two tests. The degree of pathology, when it differed, was greater or lesser by one division in all but 3 of the 126 cases; *e. g.*, an evaluation of mild according to the M. Inventory record might be according to the C.S.I. either normal or severe, and vice versa. The three exceptions were neurotics who were adjudged severe by the C.S.I. but normal by the Av scoring of the M. Inventory. Misleadingly normal scores from both tests occurred in the same types of patients (hysteria, enuresis, migraine). These data indicate that the two psychometric techniques probe similar personality factors; it should therefore be unnecessary to subject the patient to both.

The 92 questions of the C.S.I., desirably frugal of time, and the 550 of the M. Inventory appear to be similarly accurate in dis-

covering psychopathological material. In the evaluation of a single patient, however, when no need exists for screening methods, the Cornell score contributes negligibly to the clinical history; whereas the personality profile of the M. Inventory supplements it constructively.

CURVE PATTERNS

The 9 diagnostic categories have been so organized that the transference neuroses come first, psychoses, including rigid psychasthenia, last, and the psychopathic, homosexual and paranoid reaction types in the middle group. Under this arrangement certain characteristic patterns are formed when the scores of the 9 scales are charted and joined by a continuous line. Some curve patterns thus produced did not yield noteworthy correlations with any clinical picture, and some were too few in number to allow of conclusions, but those illustrated in Fig. 2 have proved useful. In analyzing the *individual* M. Inventory score sheet these curves supplant the N and P scores which are laborious to compute, and which are of chief value in statistical estimation of *groups* of patients.

The type 2 curve is representative of anxiety neurosis, neurotic depression and hypochondriasis. It rarely appears otherwise, and is associated with a high A score. Curve 3 also chiefly typifies neuroses, but this pattern characterized 6 of the 17 early schizophrenics too. An anxiety component in incipient schizophrenic reactions is not uncommon. Because it sensitively depicts anxiety, the M. Inventory's functioning to distinguish early psychoses from neuroses is limited.

In the neuroses a type 3 curve usually denotes a longer standing, more incapacitating reaction than a 2 curve. The secondary elevation on the schizophrenic scale was puzzling until the questions which make up the score on this scale were analyzed. It was ascertained that neurotics answer in a scrutable direction, statements related to confusion, concentration, memory defect, worry and depression. The schizophrenic rise in these cases does not spring from questions on seclusiveness, withdrawal, hallucinations or delusions.

The type 4 curve which is of superior diagnostic value, unfortunately prevails in only a small number of cases. It is identified mainly in conversion hysteria, psychopathic deviation, homosexuality and some simple

6 curve is found most often in mixed cases in which diagnosis is difficult and controversial. Therefore it offers little aid in arriving at a definitive conclusion, but it does reflect the clinical problem.

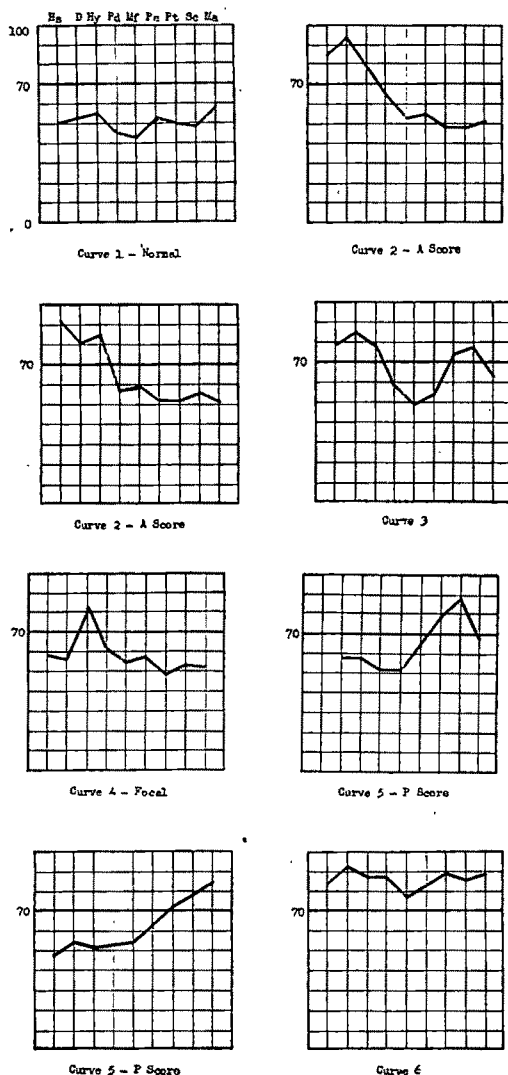


FIG. 2.—M. Inventory curve types.

depressions. It does not appear in the records of patients suffering primarily from anxiety. Curve 5, compatible with an elevated P score, is undoubtedly valuable, when it occurs, in indicating a psychotic reaction; but in early psychotic patients who are sufficiently in contact with reality to produce a valid test, anxiety or depression are so general that curve 3 usually results. The type

NORMAL RESPONSES

In evaluating M. Inventory results, certain quantitative measurements must be considered along with the qualitative comparison of relative scores of the nine diagnostic categories and category groups. Table V

TABLE V
COMPARATIVE PERCENTAGES OF NORMAL RESPONSES
ON THE M. INVENTORY IN EIGHT CLINICAL
DIAGNOSTIC GROUPS

	Controls	Clinical diagnostic groups						
		Anxiety neurosis	Hs	D	Hy	Pd	Mf	Pt Sc
Number of cases ...	100	122	10	31	15	28	10	6 17
% normal records .	78	6	0	0	27	0	30	0 0

shows the percentage of normal records for the groups thus far discussed. In a normal record all scores are under 70. Abnormal records, therefore, may have from only one to all 9 scores of 70 or over. For the 316 patients, the average number of abnormal scores per record (70 score) was 5.66.

A close correlation with clinical expectations is seen in most of the categories. As evidence of the efficiency with which the M. Inventory detects depression and anxiety, no normal records were found in hypochondriasis, depression, psychasthenia, psychopathic deviation or schizophrenia cases. Those illnesses in which anxiety is most successfully converted, hysteria and neurasthenia, showed a substantial number of normal records, 27% and 33% respectively. In the anxiety subgroups, in addition to neurasthenia, the post-combat anxieties showed fewer abnormal records, probably due to the fact that these were not true character neuroses but, rather, affective prolongations of situational difficulties. In assessing a single M. Inventory record a normal result in patients with Hs, D, Pt, Pd, or Sc would cast doubt on the diagnosis. An abnormal record in cases of hysteria or neurasthenia would

strongly verify the clinical impression, while a normal test result would neither affirm nor deny the diagnosis.

Patients who present a clinical picture of a definite neurosis, but who attain a normal M. Inventory record, may be assumed to have adjusted their neurosis to their environment with a minimal degree of residual anxiety or depression. Their normal scores, far from being misleading, are an important segment of the clinical whole.

RETESTS—PROGRESS AND PROGNOSIS

An exceedingly worth while instrument for objectively measuring the progress of a

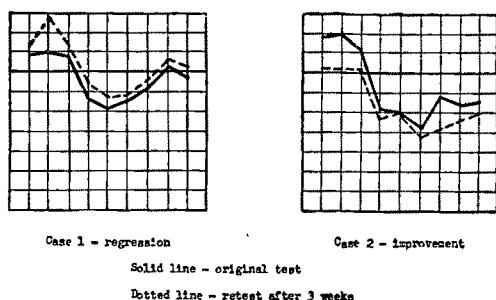


FIG. 3.—Progress of illness—M. Inventory retest.

patient's illness has been realized in the M. Inventory. It correlates almost exactly with clinical calculations in this respect. In Fig. 3 are shown two descriptive cases. The heavy lines represent the first M. Inventory results, and the dotted lines show retest results three weeks later. The amazing parallelism of original and retest curve patterns, although at different quantitative levels, increases confidence in the validity of the results.

In the first case in Fig. 3 the clinical course was downhill with deepening depression and restlessness; and prolonged hospitalization resulted. The other portion of Fig. 3 represents partial resolution of anxiety under psychotherapy. On 17 cases thus retested, improvement or increased illness as shown by the M. Inventory corresponded in every instance with the clinical appraisal.

The M. Inventory has also proved a useful tool in estimating prognoses of acute psychotic patients. Of six acute psychotic reaction cases, too ill on admission to take the test, two were destructive, one was a re-

tarded depression, and three had regressed to a mute, negativistic state. All were notably improved within two weeks, and, due to the manpower shortage occasioned by the breakthrough at Aachen, their prompt return to duty was expedient. They were tested by the M. Inventory, five making normal records and the sixth scoring 76 for Hy and 71 for D but insisting that he felt very well. All returned to military duty under psychiatric observation for about three months while they completed basic training and other assignments. The five whose test results were normal experienced no further trouble and maintained acceptable duty performance; but the sixth became tense after a month at duty, was rehospitalized in a mildly confused state, and was ultimately returned to civilian life.

BORDERLANDS

The application of the M. Inventory to various illnesses with functional components (alcoholism, migraine, post-traumatic headache, epilepsy, enuresis, somnambulism) is shown in Table VI. This tabulation fails to demonstrate a few pertinent details. In chronic alcoholics, for example, there were two completely normal records, three frankly neurotic records (curve 2), one homosexual record (curve 4), three with a high Pd score, two with a high Ma score, and one with a mixed score. Forty-one percent of the migraine patients had non-neurotic, normal records, and 57% had a high anxiety score, illustrating the diverse features of this syndrome.

In the cases of post-traumatic headache, clinical and psychometric results of other investigators of this type of patient were supported (1, 20, 21). Six cases with a history of severe injury produced two normal records and two with a high P score (type 5 curve). Nine minor head injury cases, with no normal records, had uniformly high A scores suggesting functional disorder. Among the epileptics only 13% had normal records; a majority (66%) evidenced anxiety or depression by a type 2 curve; and 42% also had a P score over 70, due chiefly to high scoring on the schizophrenic questions concerning confusion, concentration and withdrawal. Of the habit reactions,

enuresis and somnambulism, 63% and 60% respectively showed normal records. A few cases within this psychosomatic grouping were symptomatic of neuroses, and the M. Inventory indicated this etiology by type 2 and 3 curves.

TABLE VI
M. INVENTORY RESULTS IN VARIOUS
PSYCHOSOMATIC PROBLEMS.
(1) COMPARISON OF HIGHEST SCORE WITH FOUR
HIGHEST SCORES. (2) NORMAL RECORDS.

	Controls	Clinical diagnostic groups					
		Migraine	Post-traumatic headache	Alcoholism	Epilepsy	Enuresis	Somnambulism
Number of cases	100	12	17	12	22	22	5
(1) Highest score M. Inventory	Hy	Hs	D	Sc	D	D	D
	27	58	44	17	67	37	20
	Ma	D	Hs	Ma	Sc	Hy	Ma
	24	26	38	17	13	27	20
	D	Hy	Sc	Pd	Hy	Pt	Mf
Four highest scores M. Inventory	11	16	12	17	7	27	20
	Pd	..	Pd	D	Pd	Pa	Pd
	9	..	6	17	7	9	20
	Hy	Hs	D	Sc	D	D	Ma
	73	100	87	83	93	91	80
(2) % normal records	D	Hy	Hs	Pt	Hs	Hs	Hy
	59	100	87	75	67	72	60
	Ma	D	Pt	Pd	Pt	Hy	Pt
	57	86	56	58	67	72	60
	Hs	Sc	Hy	D	Sc	Sc	Pd
All M. Inventory figures are percentages.	43	43	50	58	46	45	40
	78	41	6	17	13	63	60

With respect to epilepsy particularly, M. Inventory records emphasized the presence of emotional reaction. All 22 cases had abnormal EEG's and a convincing clinical history of organic illness; yet M. Inventory results revealed 87% emotionally maladjusted, and the desirability of psychotherapy was unmistakably suggested.

DISCUSSION

Utilitarian aspects of psychometry became forcefully apparent during the war as adequate handling of masses of men was immeasurably expedited by testing devices. The salvage value for civilian psychiatry of these

tests, however, is not proportionate. It is hardly to be anticipated that screening methods which sifted out a high number of psychopathological service problems will, without alteration, suit the needs of the clinical psychiatrist confronted with a single nervous patient.

Under some existing situations, relatively large groups of potential or actual psychiatric cases may be advantageously surveyed *in toto* (large, understaffed clinics, veterans' hospitals, industrial plants); but personal and individual relationships are inherent in the practice of psychiatry, and psychometric procedures profitable to the clinician must be adaptable to individual application and interpretation.

In this connection the M. Inventory excels most measuring tools of its type. As stated before, if the test is not erroneously employed as an exact diagnostic delineator, but is interpreted as only one part of the psychiatric investigation, it can be a practical adjunct to clinical decisions. With the chief features of the clinical mosaic in mind, the psychiatrist can utilize in the M. Inventory the several highest scores, the curve patterns, the quantitative scores including normal responses, and retest comparisons to obtain additional relevant data, thus broadening his view of the personality problem.

The M. Inventory is a personality schedule by definition of Hathaway and McKinley, not a substitute for clinical diagnosis. In fact, the more successful the M. Inventory is in its avowed purpose of defining personality structure, the less utilizable it becomes as an absolute diagnostic tool. Its inability to accomplish single, accurate diagnoses in a high percentage of cases has evoked a certain degree of criticism which is not surprising, since the results are scored entirely in diagnostic terms, and since the authors themselves in time became concerned with the diagnostic acumen of the test(8).

But why dwell upon one clear-cut diagnosis? No one should be more preoccupied than the psychiatrist with total personality organization and reaction. No one should decry more vigorously than the psychiatrist unimaginative attempts to catalogue sick personalities conveniently in an arbitrary nos-

ology. How much more important that the psychiatrist recognize the anxiety element in early schizophrenia, the depressive affect in a psychopathic personality, the hypochondriacal trends in psychasthenia!

It is precisely the M. Inventory's faculty for displaying multiplex surfaces of the disturbed personality, which fosters confidence in its validity, and increases its effectiveness beyond that of a testing tool yielding a single result only. The M. Inventory requires interpretation, as do most separate laboratory procedures, in the light of the clinical picture. It is not a substitute for the psychiatrist; it is, rather, implicit in his total clinical fact findings; for "in the evaluation of any case we must go beyond the limited objective judgment of the test and obtain an evaluation of the total situation involved. For such purposes there is no substitute for the human mind. A test cannot think but a clinical psychologist can." (Hunt, 10.)

Internists and surgeons have been encouraged to employ the M. Inventory for determining psychoneurotic and psychosomatic symptomatology in their patients (16). For the practitioner inexperienced in mental pathology to expect the M. Inventory to serve as an alternate for psychiatric consultation, would constitute over-estimation of the test's capacity and misunderstanding of its aim. Without the auxiliary knowledge of a qualified psychometrist or psychiatrist in interpreting the results, the uninitiated physician would indeed be disconcerted upon discovering (Table I) that 51% of psychiatric patients score highest on the D scale; that 21% of schizophrenics score highest on the Hy scale; or that only 14% of psychopathic personalities score highest on the Pd scale.

The M. Inventory, provided that it be properly interpreted by an expert, might be considered a candidate to fulfill the urgent need for a reliable psychiatric evaluative procedure in routine use on medical and surgical wards. A large percentage of current diagnostic errors with resultant ineffectual therapeutics can be ascribed to the organically oriented doctor's incomprehension of neurotic, psychotic and psychosomatic diseases. The magnitude and ubiquity of this intraprofessional insularity has been exposed

recently by Bennett(4) who found that his 150 frankly neurotic or psychotic patients had, prior to recognition of the true nature of their illness, been subjected to a total of 811 non-psychiatric therapeutic measures (466 medical, 244 surgical, 71 cultist).

He concluded that, "Mistakes in diagnosis and treatment of patients with functional, psychosomatic, psychoneurotic or actual psychotic disorders are so common as grave to discredit the acumen of the medical profession. The most important problem before our profession is the need for greater interest and more accurate knowledge about psychiatry." One approach to this problem, one step toward establishing a beneficial liaison between psychological and organic medicine might well be the adoption in general hospitals of routine psychometric screening methods.

It can conservatively be stated that a laboratory test of the M. Inventory type, would reveal a greater amount of significant and unsuspected pathology than do standard tests such as the blood Kahn, which are universal requisites of clinicians. In the likelihood that intricacies in its interpretation would controvert the feasibility of the M. Inventory's widespread use in extra-psychiatric medicine, it should be recognized that the gains which could be realized would heavily outweigh a considerable bulk of minor deterrents.

Tests such as the M. Inventory have the strong recommendation of objectivity, and advantages are gained by eliminating the inevitable influence of the psychiatric interviewer's personality. All questions are introduced with equal force and emphasis; most functions of the psychobiological organism are examined; possible bias in selection of material by the interviewer is avoided; the patient is not tempted to give answers aimed to please or to antagonize the psychiatrist; a true scale of subjective responses is obtained.

Unfortunately, the test lacks the constructive attributes of the patient-interviewer contact. All biographical data are not in the same ratio of significance, and evaluation of the patient's story is necessitated. Question and answer techniques of this type depend

solely upon the subject's own concept of his anamnesis and beliefs, without regard to his behavior performance. Only a single expression of the testee's behavior is recorded, his subjective reaction to a long series of objective statements.

Use of the M. Inventory encourages the patient to trust that his case is being thoroughly investigated. The new patient tends to approach the psychiatrist, as he does his family physician, with an organic outlook, and is often assailed with doubt and uncertainty when first acquainted with the intangible nature of his illness. A mathematically scored test, comparably with a thermometer, a blood count, or a B.M.R., creates an impression of concreteness in the clinical procedure, and is consequently of therapeutic value in allaying some anxiety and reinforcing the psychiatrist's authority.

The M. Inventory has been disparaged as lengthy and unwieldy. Admittedly it does exact an hour's attention from the testee and 15-20 minutes from the tester for scoring. It is, on the other hand, most helpfully economical of the doctor's time. In the length of the test certain advantages are innate. The very weight of 550 statements, with the time required to study them, discourages dissembling, evasion, understatement, neurotic exaggeration. To maintain an assumed attitude through such labyrinthine interrogation is difficult.

The liability of tests such as the M. Inventory to conscious and deliberate distortion prompted the inclusion of "lie" and "validity" statements in an effort to circumvent such misuse of the test. The 15 lie questions indicate whether the subject is attempting to place himself in an improbably acceptable light. Sample statements are "I do not read every editorial in the newspaper every day" and "I gossip a little at times." Sixteen of the 400 patients made lie (L) scores over 70, and their records were discarded. Clinical evaluation of these patients substantiated for the most part the possibility of their malin-gering. All of the 100 control records contained normal L scores.

The validity (F) score is obtained from responses to 64 statements not used in forming any of the nine diagnostic scales and only

very rarely answered scorable by normal control testees. Hathaway and McKinley believe a high F score usually invalidates the record, but Kazan and Scheinberg (11) have recently taken exception to this view. This writer's results agree completely with the conclusion of the latter authors. Thirty percent (93) of the 316 patients had an F score above the critical level of 70. Manifestly, declaring 30% of the records invalid would nullify the whole test.

Kazan and Scheinberg found also that a high F score is generally associated with multiple high scores on the diagnostic scales, and, rather than a negation of the M. Inventory, is a reliable indicator of major pathology. Out of a possible 9 in the diagnostic categories, the 93 patients mentioned above averaged 7.9 abnormal (over 70) scores; while the total 316 patients averaged only 5.66 abnormal scores.

The M. Inventory type of criterion, designed to disclose abnormalities of personality structure, fills a potentially vital niche in the rack of psychiatric armament. It is based on the sound psychobiological principle that immediate symptoms of psychic maladjustment stem from long term developmental aberrations in the personality. The ultimate in objective questionnaire techniques of this character is yet to be evolved; but the M. Inventory, which has been painstakingly validated over a period of years and complies with psychological statistical standards of accuracy and deviation, seems the best approach to date.

CONCLUSIONS

1. The Minnesota Multiphasic Personality Inventory (M. Inventory) was evaluated by application to 416 United States Army enlisted personnel. Results in this study present convincing evidence that the test is a valuable psychometric adjunct to clinical psychiatric practice.

2. It does not establish definitive diagnoses; it sometimes overemphasizes certain personality distortions and minimizes others; it requires interpretation in the light of the total clinical picture; it is not a substitute for the psychiatrist.

3. Anxiety may be satisfactorily measured

by averaging the scores of the first three M. Inventory scales, hypochondriasis (Hs), depression (D), and hysteria (Hy), to form an A (anxiety) score.

4. The M. Inventory elicits significant data in several psychosomatic illnesses. In migraine, post-traumatic headache, epilepsy, somnambulism and enuresis it meets clinical expectations to a high degree.

5. M. Inventory retests at intervals prove dependable in following the clinical course and helpful in determining the prognosis.

6. The M. Inventory makes its most constructive contribution to clinical medicine in illuminating the study of individual cases through combinations of its multiple scores which reveal many facets of the disturbed personality.

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RORSCHACH'S TEST AS A DIAGNOSTIC AID IN BRAIN INJURY

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PROBLEM

In many cases of head injury it is difficult to determine the degree to which the resultant disability is due to an organic cerebral lesion or to a functional psychological disturbance. Rorschach's test, aside from its value as a reflector of personality structure, has been reported as helpful in the detection and evaluation of organic cerebral alteration (4, 5, 6, 7). Our problem for investigation has been the determination of value of Rorschach's test in cases of head injury.

CASE MATERIAL

Case material has been taken from the wards of a neurological-neurosurgical service of an army general hospital. With few exceptions the patients were tested three to six months after injury. They were all hospitalized at the time of examination.

Control cases came from the same wards and of necessity included those with minor closed head injuries, psychoneuroses, idiopathic headaches, and a few patients who had one or two convulsions of unknown etiology. In all cases classified in the control group, it was the unequivocal opinion of the neurologist (J. A. A.) that no organic cerebral alteration existed. Cases in which the question of brain injury was not conclusively answered were omitted from the study. The control cases were not told that they were controls. They believed that they took the test as part of their routine examination. The practical value of this study may be enhanced by the fact that our controls cannot be considered strictly "normal." In a hospital situation the task is not to differentiate between "normals" and patients with pathology, but to differentiate between patients

with various types of disturbances. This practical approach has been followed in comparing our brain injured and control patients.

All cases classified as having brain injury were attested by surgeons' reports, neurological findings and pneumoencephalograms. These patients differ somewhat from the average civilian cases, in that most of them were struck with missiles and were exposed to front-line combat experiences. These men previously met the minimum physical and mental qualifications for induction into service and for overseas combat duty. Nineteen patients had been aphasic at one time, but all were clinically recovered to the extent that responses appeared in no way hindered.

For purposes of careful study the brain injured patients were divided into three groups; severe, moderate and mild. This was done on the basis of loss of consciousness (immediate, delayed, duration), amnesia (retrograde, anterograde, duration), surgeons' notes concerning the wound, pneumoencephalograms, presence of foreign bodies (depth, number, scatter), neurological signs, clinical impression of mental status, and reports of personality change by those who knew the patient many years.

METHODS AND PROCEDURE

In this study our attention will be primarily directed to three aspects of the Rorschach testing situation: (1) an analysis of overt types of behavior and other "signs" displayed by brain injured and control patients during the test administration; (2) an investigation of the quantitative data derived from the test records in each group; and (3) a review of the interpretive material in an effort to find common personality factors among the brain injured patients.

The brain injured group included 60 patients and the control group, 100. Piotrowski(7) has postulated ten specific signs

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which he has found to be of value in determining the presence of organic cerebral alteration. Inasmuch as this study includes an evaluation of the diagnostic significance of these signs, in post-traumatic cases, it is pertinent to list them here: (1) R—total number of responses less than 15; (2) T/R—average response time exceeding one minute; (3) M—no more than one human movement response; (4) Cn—at least one occurrence of color naming; (5) F+ %—below 70; (6) P%—popular response percentage below 25, in records with 25 or less responses as stated by Kelley (6); (7) Rpt—repetition or the occurrence of similar responses, three times in a record, without regard for form; (8) Imp—impotence, or the recognition of the inadequacy of a response with the inability to either improve or withdraw it; (9) Plx—perplexity, or the subject's distrust of his own ability and a request for reassurance; (10) AP—automatic phrases, or the use of a stereotyped phrase in an indiscriminate fashion in more than half of the cards.

Kelley (5, 6) has discussed the presence of impairment in abstract thinking which is frequently found in patients with organic cerebral alteration. He has pointed out that this specific disability is reflected in the subjects' inability to use the same figure or detail for more than one association, in their inability to give clear definitions of responses, and in their tendency to consider the blots as actual objects. Kelley suggested that the sign "Abs" be scored when these types of behavior occur. We have found in working with brain injured patients that one of these signs is sometimes present alone. Therefore, if scored separately, they may be of greater value. These signs, in addition to six others which we have considered, will be named, described and briefly discussed.

Inflexibility (Ifx).—This sign occurs when the subject, in his entire record of responses, does not use any part of the figure for more than one association. As Kelley (5) has noted, the subject sometimes voices an expression that, "This cannot be—— (something else), because it is a—— (original association)." This sign was not scored if the subject gave a detail response and then an unrelated whole response. If

the subject did this it would be clear that he had the ability to use the detail in another way, even though incorporated into a whole response. The sign, also, was not scored if any part of the ten ink-blots was used for two unrelated associations. Subjects for whom this sign was scored sometimes showed a tendency to elaborate the first impression received from a card, although often meagerly, rather than to drop the initial association from immediate consideration and form new and unrelated ones. This sign differs from "repetition" in that responses to individual cards are considered in determining whether or not the sign should be scored, rather than similar responses to succeeding cards.

Consideration of blots as actual objects (Act Obj).—This sign represents an extreme form of concretization in thinking. We have found that many brain injured patients will reply in the negative when asked, after the test administration, if they believe that the blots represented actual objects. This occurred even though the test records gave evidence that the patient did think they were identifying actual figures. Therefore, we have scored this sign when a review of the record revealed the use of a phrase such as, "This is a ——." If qualifying terms such as "looks like" or "might be" were used, the sign was not scored. The occurrence of this sign is often followed by "perplexity." The subject believes that he is to identify actual objects even though told that the figures are ink-blots. As a result of his frustration in being unable to find actual representations, he begins to distrust his ability and seeks reassurance.

Concrete responses (CR).—This sign was scored when, throughout the record, no responses were given which characterized a quality or attribute of the figure or object mentioned. If a response such as "two distinguished men" or "a Grecian urn" occurred, the sign was not scored. This sign is undoubtedly related to a subject's intellectual level and extent of training and background, but it is also very likely related to abstract thinking ability and is shown later in the paper to be of value.

Unclear Definition of Response (Def).—This sign does not become apparent until

the "inquiry." It has been noted by Kelley (5, 6) that if the inquiry is conducted carefully, it is possible to detect a comparative lack of ability, among some brain injured persons, to clearly point out the specific details of responses. The subject has a general impression but is impaired in his ability to define specifically the individual elements comprising the response. This sign was scored if it occurred at least once in a record.

Catastrophic reactions (Catas).—The name for this sign was borrowed from Goldstein(3). Catastrophic reactions consist of overt emotional displays (expressed in words, by groaning, etc.) during the test administration. This sign, we believe, springs from the frustration which the test situation occasionally presents. It is closely related to Piotrowski's signs of "impotence" and "perplexity," but it is expressed by a different type of behavior. Color or shading "shock" is sometimes present with this sign, but it has been scored only when an overt emotional reaction has occurred.

Edging (Edg).—The term "edging" has been described and associated with schizophrenia by Beck(2). It consists of holding the card at unusual angles, peering at it from a side view, etc. In our Rorschach testing we have noted its occurrence particularly among the brain injured patients. This may be another reaction to frustration. The patients may be trying every possible approach to yield results. It has been scored if it occurred at least once in a record.

Irrelevant comments (IC).—This sign was scored when a patient made a comment which was not pertinent in any observable way to the testing situation. It usually occurred during the short interim between the presentation of cards. For example, just after returning card V, one patient remarked, "What is that new doctor doing next door? Is he here to take the place of ———?" We believe that this type of behavior is a reflection of the subject's lack of attention to the task at hand, or the ease with which the patient's thinking is distracted. Goldstein(3) has noted similar behavior in his brain injured patients.

Covers parts of cards (Cvr Cds).—This sign was scored when a patient covered part of the card while attempting to give re-

sponses. This type of behavior, we believe, is adopted as an attempt to exclude certain stimuli which are interfering with the subject's concentration on a specific detail. It may reflect the subject's attempt to adjust to his easy distractibility by external stimuli, also a factor noted by Goldstein(3).

Withdrawal and re-attack (WR).—This sign occurs when a subject voluntarily removes his attention from a card, perhaps looking in another direction or turning the card over, and suddenly renews his scrutiny. In using this method the subject may be trying to get a new view of the situation, a different mental set. Perhaps this sign springs from "inflexibility" and is an attempt to overcome it.

Several other types of behavior have been considered as possible signs of cerebral deficit. As a result of findings by Harrower-Erickson(4) and Strauss and Werner(8), we investigated the frequency of the occurrence of vista responses in brain injured and control groups. Excessive card turning, as a possible reaction to the frustration of being unable to form adequate associations, was also studied. The level of organizational ability (Z score) was compared with the number of responses in each of the groups in order to determine whether or not this ratio is significant in differentiation. The frequency of rejections of specific cards was also investigated.

As an additional approach, a comparative analysis was made of the quantitative data derived from the records in each group. This consisted of the determination of the frequency of occurrence of the various scoring determinants and content classifications.

The final step was to review the records from the viewpoint of interpretation in an effort to detect types of personality disturbances common to patients with brain injury.

RESULTS AND DISCUSSION

The first step has been to investigate the diagnostic value of Piotrowski's signs in the detection of organic cerebral alteration. It must be noted that the signs to be considered may occur in clinical groups other than brain injured patients, with varying frequency. Many of our control cases had neurotic dis-

turbances and thus the task of differentiation was probably more difficult than if the brain injured patients had been compared with normal controls. The findings reported below are probably of increased value, because our procedure was designed to determine the effectiveness of Rorschach's test in a practical situation. However, in order to

in differentiating the total groups. In this case, too, the severely injured show the greatest differences. The sign is of little value in moderate and mild cases. Our results suggest that Piotrowski's critical level of more than 60 seconds is set too low for most effective differentiation. Because of the large standard deviations, however, the sign

TABLE I

DISTRIBUTION CONSTANTS, SIGNIFICANCE OF DIFFERENCES IN TERMS OF "t" VALUES, AND PERCENTAGE OF PATIENTS SHOWING PIOTROWSKI'S SIGNS

	N	R	T/R	M	Cn	F + %	P%	Rpt.	Imp.	Plx.	A. F.
<i>Controls</i>	100										
Means		28.06	59.73"	1.92			5.07				
%s				73.00	3.0	74.48	33.11	11.0	9.0	15.0	12.5
S. D.		15.084	28.804	2.087			2.251				
<i>Brain Injured</i>	60										
Means		24.03	75.42"	1.73			4.88				
%s				66.67	11.7	68.83	30.40	21.7	41.6	45.0	26.7
S. D.		20.664	39.917	2.032			2.443				
"t"		0.613	2.84	0.555			3.098				
<i>Severe</i>	11										
Means		15.9	93.7"	0.45			3.50				
%s				36.36	9.09	63.03	25.09	18.18	72.73	63.64	36.36
S. D.		8.306	52.676	0.656			1.373				
"t"		2.620	3.329	2.311			3.692				
<i>Moderate</i>	21										
Means		24.71	76.00"	1.76			5.00				
%s				76.19	4.76	65.13	33.99	19.05	47.62	47.62	23.81
S. D.		19.265	38.065	1.630			2.309				
"t"		n. s.	2.215	n. s.			1.948				
<i>Mild</i>	28										
Means		26.71	68.9"	2.21			5.32				
%s				71.44	18.0	70.83	30.21	25.0	25.0	35.6	25.0
S. D.		24.003	32.608	2.411			2.673				
"t"		n. s.	1.429	n. s.			1.476				

present conclusive findings, the brain injured patients should be compared eventually with other specific clinical groups. Such a method would give further information necessary for adequate differential diagnosis.

Table I presents the distribution constants, significance of differences in terms of "t" values, and the percentage of patients in each group showing the various signs.

R, or total number of responses less than 15, is not of particular value except among patients with severe injuries. The brain injured sub-groups have means which are below that for the controls, but these differences are not large enough to be of significance.

The average response time is more helpful

is probably not of great value in individual diagnosis, regardless of where the critical level is located.

The mean number of M responses is not significantly different in comparing the brain injured patients with the controls. However, in both groups a considerable number of patients had no M responses. Because of the difficulty in evaluating zeros in calculating an average, the distribution constants may not adequately compare the groups. We have also computed the percentage of patients having at least one M response. These figures indicate that only the severely injured show a difference in this respect which is of practical significance.

Color naming, a sign Piotrowski found to

be of value, occurs more frequently among the brain injured patients than among the controls. However, our results suggest that this sign is found relatively infrequently among post-traumatic cases, and its value is thus restricted. Color naming occurs most often in our mild brain injured group. This may indicate a greater value of the sign in that it is most effective in the group which presents the greatest difficulty in differential diagnosis.

The F+ % does not show a great difference between the groups. Although the percentage for the total brain injured group is 68.83, the percentage for the controls is only 74.48. The difference between the percentages in the two groups is not sufficient to be of value in individual diagnosis. This finding is of value because it indicates that post-traumatic brain injured men retain, to a fair degree, their sense of reality.

The popular response percentage, in records with 25 or less responses, is not of great significance. The mean number of popular responses is slightly higher for the controls, but the mean number of total responses is also higher, and the percentage is approximately the same in each group. The means are of greater differentiating value than the percentages. In comparing the total groups a statistically significant difference is found. The mean for the severely injured is also significantly different. However, the practical significance of this finding is negligible because the actual difference between the means is not great enough to be of help in individual diagnosis.

Repetition is shown to be of some value, even though this sign does not occur in the majority of cases in either group. This sign seems to be of greatest importance in identifying patients with mild brain injuries.

The results of this study indicate that impotence is one of the most important signs that Piotrowski has postulated. As shown in table I, 41.6% of the brain injured patients and only 9% of the controls gave evidence of this sign. It will be noted, however, that as the severity of the injury decreases, impotence occurs less frequently. Our experience suggests that the extent to which the sign is present in an individual record is positively related to the degree of intellectual

impairment and personality changes. This sign, therefore, is valuable not only as an indicator of brain injury, but also as a suggestion of the extent of the resultant disturbances.

Perplexity ranks approximately with impotence in the degree to which it indicates the presence of brain injury and its after-effects. The results suggest that it is of somewhat greater value than impotence in diagnosis of persons with mild brain injuries. However, perplexity occurs slightly more frequently than impotence among our controls.

Automatic phrases closely approximates repetition in importance. Our results indicate, however, that the presence of automatic phrases is more frequently associated with severe damage, although it also is present in about 25% of the patients with moderate and mild injuries.

Table II presents the percentage of patients in our brain injured and control groups who gave evidence of the additional signs which were mentioned in the previous section.

Inflexibility occurs more frequently among the controls than do any of Piotrowski's signs. However, it occurs over twice as often among the brain injured as among the controls, and is thus of definite value. Although the frequency of the occurrence of this sign decreases as the severity of the injury decreases, it does "hold up" fairly well. In our mildly injured group, 57 percent of the patients showed the presence of this sign.

Consideration of blots as actual objects is found in 25% of our control patients. It was present in 70% of the brain injured cases.

The results indicate that this sign is particularly helpful in identifying patients with mild and moderate organic cerebral alterations. This feature of the sign increases its value, because patients with less severe injuries generally give fewer indications.

Concrete responses is a sign which is present to a considerable degree in each group. Because of this, its presence must be interpreted cautiously. Its frequency is definitely greater in our brain injured group than in our controls, however, and this indicates that it is of some value. This sign occurred in 100% of our severely injured patients and

less frequently in our moderate and mild sub-groups.

Unclear definition of responses is one of the most helpful signs to be discussed. It was present in 70% of the brain injured patients and 15% of the controls. As noted earlier, a carefully conducted inquiry is necessary to detect the presence of this sign. The frequency with which this sign occurs drops off rapidly as the severity of the injury decreases. Nevertheless, 53.6% of the mildly injured group showed the sign.

of the time. Irrelevant comments is mainly associated with serious damage.

Covers parts of cards is a sign which ranks approximately with repetition and automatic phrases. It occurs a little less frequently (18.3%), but it is also present in fewer of the controls. This type of behavior is used more frequently by patients with moderate and mild injuries than by those with severe injury. If the patient shows the ability to use this method to overcome his distractibility by external stimuli, an indication may

TABLE II
PERCENTAGE OF PATIENTS SHOWING ADDITIONAL SIGNS PROPOSED BY THIS STUDY

	Hfx.	Act. Obj.	CR	Def.	Catas.	Edg.	IC	Cov. Cds.	WF.
<i>Controls</i> %s	28.0	25.0	48.0	15.0	1.0	17.0	4.0	6.0	3.0
<i>Brain Injured</i> %s	61.7	70.0	86.7	70.0	31.7	41.6	21.7	18.3	8.3
<i>Severe</i> %s	72.73	63.64	100.	100.	72.73	63.64	45.45	9.09	27.27
<i>Moderate</i> %s	66.67	76.19	90.48	76.19	23.81	33.33	23.81	23.81	0.0
<i>Mild</i> %s	57.1	68.0	78.6	53.6	21.4	39.0	10.7	18.0	7.1

Catastrophic reaction is another valuable sign. It does not occur frequently in either group, but when it is present it is almost definitely pathognomic. Only 1% of our controls and 31.7% of our brain injured cases gave evidence of the sign. The sign occurs most frequently in the severely injured, although over 20% of each of the moderate and mild sub-groups also demonstrated it.

Our results show that "edging" is an important sign, ranking slightly below perplexity. It occurs in 41.6% of the brain injured patients and 17% of the controls. Edging "holds up" fairly well in the mild cases. In these it is probably more valuable than any of Piotrowski's signs.

Irrelevant comments is not present frequently in either group. The primary value of this sign is that it occurs in only 4% of the controls. Thus, being present in 21.7% of the brain injured patients, its occurrence may be considered a valuable indication of organic cerebral alteration. However, in mild cases, this sign is present only 10.7%

be present that the impairment is not extreme.

Withdrawal and re-attack is valuable in cases of severe brain injury. It rarely occurs among controls (3%), and Table II shows that it is of little help in distinguishing patients with mild and moderate injury.

In addition to the above, several possible signs of brain injury were investigated which did not prove to be of great value. The mean number of vista responses does not differentiate between our brain injured groups and the controls, except for the severely injured. The percentage of cases with vista responses is of greater value than the means. Our results indicate that patients with severe and moderate cerebral injuries have at least one vista response in only 20 to 25% of their records, and 46% of the controls have at least one of these responses. Excessive card turning was not found to be of help in detecting brain injury. The level of organizational ability (Z score) in relation to the number of responses is also of little value. It is in-

teresting to note that the mean Z score approximately equalled the mean number of responses in each of our groups.

An investigation was made of the frequency of rejection of specific cards and the percentage of patients who rejected at least

values, and percentage of the records containing the various scoring determinants. In some cases the means were so small the significance of difference would have little practical value. In these instances they were not calculated.

TABLE III
PERCENTAGE OF REJECTIONS

Groups	N	Card 1	Card 2	Card 3	Card 4	Card 5	Card 6	Card 7	Card 8	Card 9	Card 10	Patients rejecting at least one card
Severe	11	9	18	0	0	27	27	9	9	45	0	55
Moderate	21	5	9	10	10	5	24	10	0	14	14	37
Mild	28	4	4	7	7	11	14	7	4	18	18	36
Total Brain Injured	60	5	8	7	7	12	22	8	3	22	13	40
Controls	100	2	5	7	6	2	14	13	1	9	9	33

TABLE IV
DISTRIBUTION CONSTANTS, SIGNIFICANCE OF DIFFERENCES IN TERMS OF "t" VALUES, AND PERCENTAGE OF RECORDS CONTAINING THE VARIOUS SCORING DETERMINANTS

	N	R	W	DW	D	Dd	App.	Exp.	Z	F +	F -
<i>Controls</i> Means S. D. %	100	28.06 15.084	7.44 6.136	.15	17.68 9.617	2.75 51.67	W!D(Dd)	1.92;3.80	29.70 23.466	11.91 5.852	4.08 3.375
<i>Brain Injured</i> Means S. D. "t" %	60	24.03 20.664 0.613	5.72 4.564 1.857	.12 n. s.	15.60 14.245 1.045	2.62 n. s. 62.00	W!D(Dd)	1.73;3.24	22.21 16.629 2.141	9.37 7.880 2.299	4.48 4.345 n. s.
	C	CF	FC	V	VF	FV	Y	YF	FV	S	A%
<i>Controls</i> Means %	1.01 43.00	1.35 56.00	1.86 68.00	.... 0	.07 5.00	1.03 43.00	0.11 9.00	0.36 18.00	3.32 84.00	3.08 76.00	44.98
<i>Brain Injured</i> Means "t" %	0.95 n. s. 40.00	0.87 48.33	1.88 n. s. 71.67	0.05 1.67	0.03 1.67	1.43 36.67	0.15 n. s. 10.00	0.22 13.33	2.20 61.67	3.00 68.83	44.94

one card. The results are shown in Table III.

In comparing the rejections of the brain injured with the controls, it is apparent that cards 5, 6, and 9 show the largest differences. These findings may be of some assistance as substantiating evidence if other indications of organic cerebral alteration are present.

The quantitative data derived from the psychograms were also studied. Table IV presents the distribution constants, the significance of differences in terms of "t"

The number of responses, already discussed, does not significantly differentiate the groups. The number of W, D, and Dd responses also is not helpful in this respect. The average approach for each group has been calculated following Beck's suggestion (1) that the normal approach reflects a W, D, Dd distribution of 6, 20, 4. We find in our cases that W is weighted in using this formula. This cannot be construed as a disagreement with Beck's figures, because our

control group consisted of hospitalized patients and cannot be considered strictly normal.

The experience balance is similar in each group. The mean Z scores, though lower for the brain injured group, are not significantly different. The mean number of F+ responses in each group shows a difference which is significant at the 1% level. Although this does differentiate between the groups, it is of little assistance in identifying individuals with brain injury. The mean number of F- responses was not found to be of value.

Because many of the records had none of the scoring determinants that remain to be discussed, the mean number will be given little emphasis. It is clear that the means offer little help in an individual situation. A comparison of the percentage of records in each group having at least one of the remaining scoring determinants is of slightly greater value.

In general, a greater percentage of the controls gave responses which made use of each of the scoring determinants. The controls gave CF responses slightly more often than did the brain injured patients, but the C and FC responses show insignificant differences. The vista responses also are of little help as earlier mentioned, although FV responses are slightly more frequent among the controls. Except for FY, the Y responses are of little value. FY responses, however, occur in 84% of the controls and only 61.67% of the brain injured patients. The absence of FY, therefore, may be a corroborating factor if other indications point toward organic cerebral alteration. Included among the responses scored FY were texture and surface shading. White space (S) responses are slightly more frequent among the controls but are of no practical significance.

It can hardly be expected that a single quantitative factor will adequately differentiate the brain injured and control groups. Interpretation of the individual record may yield more promising results. Interpretation, of course, necessitates a consideration of the influences of one factor upon another, and results in an integrated reflection of the personality structure.

The frequency of occurrence of responses

falling into the various content classifications was also investigated. The results show insignificant differences between the groups. The mean number of H, Hd, A, and Ad responses, particularly, are nearly equivalent in the brain injured and control groups.

The records in each sub-group of the brain injured patients and those in the control group were examined in an effort to find common factors in interpretation. We have no "normal" base line from which to make a comparative analysis, because many of our controls gave indications of neurotic disturbances. Nevertheless, certain types of disorders, aside from intellectual impairment, are consistently present in the brain injured patients. It will be of value to point these out, primarily to stimulate further investigations in which individuals with organic cerebral alterations can be compared with cases which fall more closely into the "normal" range than do our controls.

The patients with severe injury, without exception, gave indications of the presence of anxiety. The anxiety states ranged from mild to severe disturbances. A high percentage of these records also suggested the presence of depression and hypochondriasis in varying degrees. Relatively poor emotional control and adjustment were present, although this was not found as frequently as the above factors. In the case of one patient with fairly normal adjustments prior to injury the test results closely resembled those common to schizophrenia. In each of the cases in this group signs of cerebral deficit were unmistakably present.

In the group with moderate cerebral injuries a few records reflected normal personality adjustments, but indications of anxiety and depression were frequently present. Suggestions of hypochondriasis occurred somewhat less frequently. Several of the test results gave indications of schizophrenic-like disturbances.

Anxiety indications were consistently present in the mildly injured group. Feelings of inferiority were also found often in these records. This may be a result of the patients' comparatively greater ability to understand the possible future effects of their injuries. Some of the cases evidenced trends of mild depression and hypochondriasis. A

few in this group also showed the presence of schizophrenic-like disturbances.

Each of the types of disturbances mentioned above was present more often among our brain injured patients than among the controls, even though many of the controls had at least mild neurotic disturbances. These common interpretive factors cannot differentiate between persons with and without organic cerebral alterations, but they do indicate personality maladjustments that are frequently among the after-effects of brain injury.

In a following study we shall consider the influence of intelligence upon the occurrence of the Rorschach signs of brain injury that have been discussed. It is immediately apparent that the intelligence of the subject is of significance in determining the presence or absence of at least some of the signs. Therefore, it is of value to know the extent to which the signs must be present, in the various intelligence levels, before the possibility of brain injury can be indicated.

CONCLUSIONS

The findings in this study suggest that impotence and perplexity are the most important of Piotrowski's signs in identifying persons with post-traumatic cerebral injury. Automatic phrases and repetition are also of definite value. Color naming occurs less frequently in both brain injured and control patients than those mentioned above. However, it occurs so rarely among controls that it is also of diagnostic value. The results suggest that color naming is most helpful in cases with mild injuries. The number of M responses, average response time, and total number of responses are not of significant value except among patients with severe cerebral injuries. The F+ % is generally lower among brain injured patients than among the controls, but this difference is not sufficient to be helpful in individual diagnosis. The popular response percentage, in records of 25 or less responses, was not found to be of value. The mean number of popular responses may be of assistance in identifying patients with severe injuries, although its importance is negligible in the moderate and mild cases.

Of the nine additional signs which we have named and evaluated, unclear definition of responses is probably the most important. This sign was present in 70% of the brain injured patients and only 15% of the controls. Consideration of blots as actual objects is also of definite assistance. It "holds up" very well in patients with mild cerebral injuries. Catastrophic reaction occurs in only 31.7% of the brain injured patients. However, its occurrence strongly suggests the presence of organic cerebral alteration because it is found in only 1% of the control patients. Inflexibility is also of definite value, being present in 61.7% of the brain injured and 28% of the control cases. This sign is of definite help in identifying patients with mild cerebral injuries. Irrelevant comments is usually found only in patients with moderate or severe injuries although it is probably also of some value in diagnosing mild brain injuries. Edging is present frequently among brain injured cases and is of help in differentiating these patients from our controls. This sign is slightly less important than perplexity. Concrete responses occurs in 48% of the controls and thus must be interpreted with caution. Its presence in 86.7% of the brain injured patients justifies including it among possible indicators of cerebral damage. Covers parts of cards is valuable primarily in identifying patients with mild and moderate injuries. It is of little help in cases with severe cerebral alterations. Withdrawal and re-attack, conversely, is associated almost exclusively with severe injury.

An analysis of the quantitative data derived from the test records gave little information which can be used in differentiating post-traumatic brain injured patients and controls.

Certain common factors in interpretation are present in the records of brain injured patients. Anxiety was consistently reflected in each of the brain injured sub-groups. Feelings of depression were also regularly present in each subgroup, though not as frequently among the patients with mild injuries. Hypochondriasis was found most frequently among the severely injured, but was also often reflected in the records of the remaining patients with cerebral damage.

Occasional schizophrenic-like records occurred in each of the brain injured sub-groups. Impaired emotional control was significantly present only among patients with severe injuries.

SUMMARY

The Rorschach test records of 60 post-traumatic, brain injured patients have been compared with those of 100 control patients in an effort to find factors characteristic of organic cerebral alterations. Piotrowski's ten signs of cerebral disturbance have been evaluated. The results indicate that impotence, perplexity, automatic phrases, repetition, and color naming are of value in identifying brain injured patients. Nine additional signs, which are found to be helpful in diagnosis, are named and discussed. A review of the test records from an interpretive viewpoint indicates that anxiety, depression and hypochondriasis were frequently present and schizophrenic-like disturbances were occa-

sionally present among the brain injured patients.

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SITUATIONAL AND ATTITUDINAL INFLUENCES ON RORSCHACH RESPONSES

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THE SUBJECTS

The Rorschach test has been widely employed as a clinical tool in army installations. Recently there was a discussion of Rorschach data obtained from duty personnel in an army installation(8). This paper deals with data obtained in a number of army hospitals by various clinicians.

The writer was given access to the Rorschach records of all the patients who in the past 13 months had been referred for consultation to the neuropsychiatric service of a large military hospital.² Since we were interested in normal individuals' responses to the Rorschach, we selected the data of those patients (henceforth to be called the C-group) whose clinical records, case histories, and scores on all tests administered by the neuropsychiatric service, other than the Rorschach, were negative.³ Aside from the fact that the 351 soldiers in the C-group had been sent to the neuropsychiatric service, usually because the medical service thought that their complaints were out of proportion to the findings of the physical examinations, they could be considered as psychiatrically "normal." All their Rorschach protocols had been analyzed in accordance with the directions given by Beck(2).

An analysis was also made of data from 256 Rorschach examinations administered and scored by the writer or one of his colleagues at three other military hospitals. The soldiers in this group (henceforth to be known as the L-group) include 80 who were duty personnel, *e. g.*, nurses or occupational therapists, and 176 who had been referred

for consultation to the neuropsychiatric services of the hospitals, but whose clinical records, etc., were negative. All the protocols of the L-group had been analyzed in accordance with the directions given by Klopfer and Kelley(7).

The C-group consisted of white male soldiers, 18 percent of whom were officers. Their ages ranged from 19-59, with 68 percent between 21-26 years. Bellevue-Wechsler scores placed 9, 24, 39, 11, 7 and 10 percent, respectively, in the borderline, dull normal, average, bright average, superior and very superior categories of adult intelligence. Only 8 percent had had less than six years of elementary school, 15 percent were public school graduates, 26 percent had attended but not graduated from high school, 23 percent were high school graduates, 13 percent had attended but not graduated from college, and 15 percent had college degrees ranging from the Bachelors to the Ph. D., D. D. S. and M. D. About 65 percent of the group came from rural communities of the southern and southwestern states.

It was mentioned above that the L-group consisted of both patients and non-patients (31 percent). About 4 percent were females, 11 percent were officers, and 14 percent were colored soldiers. Most of its members came from southeastern rural communities. On the whole, the L-group was of somewhat lower educational and intellectual status than the C-group.

PRESENTATION OF RESULTS

In discussing the various types of responses to the Rorschach plates, some authors, *e. g.*, Bochner and Halpern(3), Brusel and Hitch(4), Klopfer and Kelley(7), and Rorschach(12), give results made by "normal" civilians. Although these numbers are not presented as standardized norms, they are indicated, by implication in some instances, as reference points for analysis of protocols. Since these manuals have been

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² This was accomplished through the courtesy of Jessie H. Craft who had administered and scored the Rorschach examinations.

³ It would have been best to use as subjects soldiers who were not hospitalized for any reason, but not a sufficiently large number of protocols was available to the writer under this restriction.

used in the army, and one of them (4) was designed for military usage, it may be worthwhile to compare these normal reference points with the responses made by the C-group and L-group. Comparison is made difficult because most manuals do not state (a) on how many subjects' responses the results are based, (b) whether the results embrace the entire range of obtained responses, are the interquartile range, or perhaps a range of averages, and (c) whether a quoted average is a median or mode, etc. Moreover, little or no information is furnished concerning the subjects' I. Q.'s, socio-economic levels, educational and cultural backgrounds,

included non-patients, although they differed in composition in some other respects, and even though their protocols were scored in accordance with the directions of different manuals, show similar results in most categories. Our data differ, in some categories rather strikingly, from those given by some or all of the other authors. Note the smaller lower limit for our groups' total number of responses (R)—and this would have been even lower if subjects who gave less than 10 responses had been included—the decrease in average W, d and Dd, M and O reactions, and the increase in average F, A and D reactions.

TABLE I

	Normal				Range		Mean \pm S.D.	
	Bochner and Halpern	Brussel and Hitch	Klopfer and Kelley	Rorschach	C-group	L-group	C-group	L-group
R .....	.....	25-50	20-40	15-30	10-91	10-51	21.2 \pm 10.9	20.1 \pm 7.9
W%	25-30	25-30	30	.....	0-91	0-93	16.8 \pm 3.1	14.2 \pm 1.8
D%	65-70	40-60	.....	.....	0-95	0-97	79.2 \pm 9.2	73.6 \pm 3.7
d and Dd%..	10	10	5-15	.....	0-93	0-93	0.7 \pm 2.6	1.6 \pm 2.8
F%	20-50	50-55	50	.....	44-100	56-100	60.4 \pm 26.3	87.2 \pm 9.7
A%	35-50	25-50	.....	30-55	0-93	0-91	62.5 \pm 3.6	64.3 \pm 4.6
Pop.%	20	20-30	.....	.....	0-67	0-60	15.4 \pm 2.9	13.6 \pm 2.6
O%	10-20	15-20	.....	0-20	*	0-6	*	0.5 \pm 1.9
M	1-3	2-5	1-3	2-4	0-8	0-6	1.1 \pm 1.4	1.0 \pm 1.2

* Beck's method of analysis does not include O responses.

and the circumstances of the test situation. Nonetheless, it may prove of interest to compare these normal reference points with our data.

Table I contains for the various categories of responses the figures presented for normal individuals by these authors,⁴ and the entire range as well as the mean together with its standard deviation for the C- and L-groups. The table does not include the protocols of those of our subjects who gave a total of less than 10 responses, because such a protocol was considered to contain insufficient data for analysis. Thus, 20 subjects of the C-group and 28 subjects of the L-group were omitted.

An examination of table I reveals that the various authors differ somewhat among themselves in their normal reference points. The C- and L-groups, although one consisted exclusively of patients and the other

Linn(8) also noted discrepancies between his results, based on normal soldiers, and those given by these manuals. Some of the discrepancies he found follow the same trend that we observed, *e. g.*, the increase in F and A and the decrease in M, but in a number of categories his data differ sharply from ours (*cf.* 8, page 23). He puts forth the following hypothesis in an attempt to explain why his soldiers showed norms which differed from those based on civilian populations.

Adaptation to military life involves drastic and deep-seated changes in the behavior and thinking of the individual. The life of the soldier is regimented and ritualized. . . . In making this adjustment the individual regresses to a less mature level of performance. He becomes constricted in his interests, ambitions and energy output. . . . If this vast transformation in the thinking and behavior of the draftee did not manifest itself in a new set of "normals" in the Rorschach test, it would be truly remarkable. . . . Actually the Rorschach results reflect these changes very well. In the test situation the individual does no more than he has to. The result is a great diminution in

⁴ The figures are taken from the table given by Linn (8, page 23).

the number and quality of the responses . . . high reliance on popular responses and "cheap" responses involving poor form and demanding a minimum of intellectual effort. . . . Stereotypy of thinking is evident in the limited content of the responses, and the high F and A percentages. Poverty of inner life and emotional immaturity is evidenced by the amazing lack of human movement (8, pages 21-22).

This explanation does not seem to be wholly satisfactory for the subjects of this study. For some of them, who had come from circumscribed homes or communities, army life represented freedom rather than regimentation and ritualization. Army life in some cases brought about an increase in the number of interests and avenues of self-expression, a widening of the behavioral and geographical worlds. Moreover, discussions with the subjects and analysis of other test data revealed that many of the soldiers did not appear to have as much "poverty of inner life and emotional immaturity" as the Rorschach protocols would seem to indicate.

READMINISTRATION OF THE RORSCHACH PLATES

In an attempt to understand the nature of their responses, the writer used the following procedure in the case of 103 subjects in the L-group whom he tested. After completing the inquiry part of the examination, the examiner said to the soldier, in effect, if his responses had been limited in content: "Some people see different kinds of things in these cards. They see animals, plants, human beings, or parts of these objects. Here is the first card again. Let us see whether you too can find a part of or a whole animal, plant, or human being." If he failed to give new responses, he was told to look for specific objects which he had not mentioned during the free association part of the test. To subjects who still did not respond, the examiner said, for example, "See, here is a face," and "Here is a flower," and outlined the figures with his finger. The subject was asked whether he could now see the objects and was asked to trace them. Card II was presented without comment. After one minute, if the individual gave no new responses, the procedure used in the first card was followed. In this manner, all the plates were again presented.

Where no M response, for example, had been made, the above described method was modified to fit the determinant or location feature in question.

In many cases, as we went from card to card, subjects spontaneously gave new responses. Each subject was asked, after the last card was represented, why he previously had or had not given certain responses, or why he still failed to name certain objects. This led to a discussion of their responses. A summary of their comments during this discussion is presented below.

SUMMARY OF SUBJECTS' COMMENTS

1. Disinterested attitude: Did not exert himself because (a) it was only inkblots, child's play, foolishness; (b) he had been given many tests in the army which usually meant nothing; (c) he saw no connection between the test and his physical ailments; (d) he resented being tested, was tired of being pushed around from doctor to doctor; (e) he was preoccupied with problems and worries and not in the mood for flights of imagination.

2. Fearful of test or tester: He was afraid that what he said would be used against him, would seem silly or "psycho." He was on guard against the officer who tested him.

3. Misunderstanding of instructions: Did not know what he had to find; not sure what was considered a correct answer; thought there was some definite figure hidden in the design which he must find; that he had to give only one response to each card; that he had to give only W responses (*cf.* the high upper limit of W responses); that what he found must contain all the features of the object named, must be perfect in all details, or else it would be considered incorrect, cheating, or "psycho." He thought that the time he took to answer was important, hurried, and became confused (for the effect of speed on thinking, see 9, pages 53-56). A few said that they had seen some sort of design but had had no name for it and therefore did not mention it.

4. Effects of present or past experiences: Some event in civilian life, sometimes related to his profession, or in the army, here or overseas, was brought to mind by the ink-

blots. He saw animals because of his farm life, hunting or fishing hobbies (*cf.* the high average of A responses with the fact that most subjects came from rural communities).

5. Literal minded: If he found one object, he could not recombine its features so that they would form something else—one cannot see two objects in the same place. He looked for shapes and not for movement because there is nothing moving on a card (note the small average of M responses).

6. Unsuccessful attempt: He really tried to see something in the inkblots but often could not succeed. (This comment was made by a number of the subjects.)

CONCLUSIONS FROM SUBJECTS' COMMENTS

From these comments it seems that it may be of importance for proper interpretation of the Rorschach protocols to determine why certain responses were or were not made. The responses may have been influenced by the subject's attitude toward the test, toward the examiner, and by assumptions about the test and his task. The protocols may thus reflect temporary adjustments or reactions and specific attitudes which are related to the test situation, rather than reflect basic personality patterns. Educational, occupational and cultural background may also have influenced the responses to the extent that these are more a reflection of this background than of the dynamics of the personality.

In view of the lack of emphasis on this matter in some of the manuals, it might not be out of place to reiterate what has become common knowledge in contemporary psychology. One's perceptions are influenced, especially in ambiguous situations, by cultural and social factors (1, 6, 10, 11, 13) and by mental sets (11, 14, 15). The Rorschach plates are ambiguous perceptual situations. How an individual structurizes them may lead to insight into his personality, but the structurization is not derived independently of social, educational and situational factors. A proper evaluation of the personality can be made only after these influencing factors are known and taken into account.

Research is needed (a) to determine the relation between various types of back-

grounds and attitudes, and the different categories of responses; and (b) to develop methods of preparing the subject for the Rorschach examination so that he will face it with the proper mental set, of precluding misunderstandings of instructions and false assumptions concerning the test and the task. Also, it is the writer's impression that some individuals lack the ability to react to ambiguous perceptual situations (*cf.* comment 6). Perhaps it would be of value to devise methods of determining this in advance, and of deciding whether the subject in question is more amenable to other, *e. g.*, manipulatory, auditory or verbal test material.

SUMMARY AND CONCLUSIONS

Many of the manuals on the Rorschach present data for "normal" subjects which explicitly or implicitly are given as normal reference points. These reference points differ somewhat from manual to manual. They differ a good deal from the Rorschach data obtained from two army populations examined by the writer and his colleagues. Linn(8) also found discrepancies between the responses made by his soldiers and "normals" based on civilian populations. His explanation of the cause of the discrepancies does not seem to suffice for our groups.

An attempt to throw light on the nature of their responses led to a detailed study, in the case of some of our subjects, of each card. This involved readministration of all the plates and was followed by a discussion with the subjects of their reactions. Their comments during this discussion helped to explain why they initially responded to the Rorschach plates as they had. These comments showed that the responses had been influenced by the operation of specific attitudes toward the test and the tester, by previous experiences, and by the educational, occupational and cultural background. They suggest the importance (a) of knowing this background, (b) of knowing the subject's assumptions about and attitudes toward the test and the examiner, (c) of preparing the subject for the test so that he will face it with the proper mental set and without false assumptions, and (d) of segregating those individuals who do not react adequately to

ambiguous perceptual objects but who might give richer responses to tonal, manipulatory or verbal materials.

A partial explanation of the differences in the various normal reference points for the Rorschach examination may be that the populations on whom the norms were based differed in backgrounds and attitudes.

Perhaps the discrepancies in the "normals" is one indication of the difficulties involved when the Rorschach test, which was designed and extensively used for the diagnosis of psychiatric disorders, is applied to normal individuals. That which is an excellent tool for categorizing individuals into various disease entities, may require reevaluation before it is used for normal individuals. What may be needed is a thorough study of normal subjects' protocols without the use of present clinical concepts, percentages and ratios. This may lead to reconsideration of the significance of various categories and ratios of responses when made by normal individuals, and to the discovery of more adequate methods of studying normal personalities.

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PRELIMINARY TEST OF INTELLIGENCE

A BRIEF TEST OF ADULT INTELLIGENCE DESIGNED FOR PSYCHIATRIC EXAMINERS¹

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PROBLEM

A brief test of intellectual level, recently developed by the authors, will be reported here. The test has been named the Preliminary Test of Intelligence (abbreviated to P. T. I.). It has been designed primarily to meet the needs of the psychiatric examiner, but it may also be useful to other clinical examiners who find it important to make a tentative and rapid appraisal of the intellectual capacity of the patient.

Every psychiatric examiner necessarily makes some estimate of his patient's intelligence. Referral to a clinical psychologist for a more precise determination is often not feasible because of limitations of time or because such services are not available. As a result most psychiatrists are forced to resort to a variety of procedures which are without standardization and highly unreliable. Many examiners estimate intellectual level by asking a few questions on current events and a few problems in arithmetic. They depend for their comparative ratings on "subjective norms," which they have acquired through years of experience. Another method frequently employed consists in the selection of various easily administered items from widely used standardized tests of intelligence such as the Revised Binet or the Wechsler-Bellevue Intelligence Scale. This procedure is unsatisfactory not only because the results of an incomplete test are of doubtful value, but because the administration of isolated items may invalidate the future use of the complete test.

The test to be described here can provide a more reliable estimate of intelligence level than the procedures now employed by most

examiners who have had no training in clinical psychology. The test has been standardized on adolescents and adults. It can be administered and scored in from 5 to 15 minutes. It is not offered as a substitute for the more precise instruments for measuring intelligence, which necessarily require more time and special psychometric training. What it does provide is a more adequate way of performing the intellectual appraisal which the psychiatrist himself must often undertake, within the limits of time that he can afford to devote to it.

CONSTRUCTION OF THE PRELIMINARY TEST OF INTELLIGENCE

The P. T. I. in its final form as reported here consists of four brief sections, with the following numbers of items:

Vocabulary: 4 items.
Comprehension: 2 items.
Similarities and differences: 2 items.
Arithmetic: 3 items.

As some items can often be omitted, the test is even shorter than this list would suggest. The manner in which items may be omitted will be indicated when instructions for administering the test are presented.

The first step in the construction of the test was a decision as to the types of sub-tests to be included. It was considered desirable to have a variety of sub-tests, since the performance of a psychiatric patient often varies markedly from one type of item to another and the use of any single type might give a highly distorted estimate of his general intellectual level.

Five sub-tests were originally selected, through the following considerations. *Vocabulary* items were included because of the wide evidence that for children and young

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adults they provide the most nearly adequate single measure of intelligence. *Comprehension* items were included in an effort to get some indication of what might be called "judgment" or "common sense." The ability to detect *similarities and differences* is presumably related in some way to the capacity for conceptual and abstract thinking. *Arithmetic* and *non-verbal* items were added because performance with this type of material is most frequently affected by organic brain disease.

The non-verbal sub-test, which was similar to the paper-cutting items on the Binet test, was by far the most lengthy portion of the test. The results of the standardization showed that the non-verbal section added very little to the efficiency of the other four sub-tests in predicting Wechsler-Bellevue scores. It was, therefore, omitted from the final form of the test. In the course of the standardization it became clear that the four remaining sub-tests would provide a satisfactory battery for our purposes, and they were all retained.

For most of the sub-tests, items were devised by the authors. The vocabulary items were selected at varying levels of difficulty from the vocabulary list published by Atwell and Wells (1). For each sub-test, more items were devised at first than were expected to be included in the final form.

STANDARDIZATION PROCEDURE

The purposes of the procedures used in standardization of the test were as follows:

1. To permit the selection of the most suitable set of items out of those included in the preliminary form of the test.
2. To establish standards for scoring responses to the items which are retained in the test.
3. To determine the relationship between performance on this test and on the Wechsler-Bellevue.

An initial step toward selection of items was made by giving this test alone to a group of about 40 hospital patients and students. The test was still left with more items than were eventually desired, however, and further reduction was left until evidence could be obtained from the main standardization.

The main standardization involved the administration of the P. T. I. to 150 persons for whom scores were also available on the Wechsler-Bellevue. This standardization group was diverse. The largest single group (92) was made up of patients in the psychiatric in-patient and out-patient clinics of the Yale University School of Medicine. Fourteen were bed patients on the general wards of the New Haven Hospital, 16 were counselees of the Vocational Counseling Service of New Haven, 14 were inmates of the Southbury State Training School for the Feeble-Minded and 14 were students, employees, etc. The standardization group was considerably more varied in

TABLE I

AGE DISTRIBUTION OF 150 SUBJECTS USED IN STANDARDIZATION

Age	No of subjects
61-70.....	12
51-60.....	13
41-50.....	15
31-40.....	20
21-30.....	58
16-20.....	26
11-15.....	6

intelligence than in the general population; for this reason, certain corrections will be made in some of the statistical results to be reported later. The ages also varied greatly, as indicated in Table I.

The tests were administered by several examiners in addition to the authors.² About half the subjects took the Wechsler-Bellevue test before taking the P. T. I., and about half took the P. T. I. first. The feeble-minded subjects at the state training school had taken the Wechsler-Bellevue about six months before, on the average. All other subjects were given the two tests at the same session or within a very few days of each other.

² We are greatly indebted to the following persons for their generous cooperation in administering the present test, or in supplying Wechsler-Bellevue scores: Marion Brody, Roderic Gorney, Ann Horton, R. W. McClure, Jr., Angela Quadfasel, Esther K. Sarason and Seymour Sarason. The cooperation of the New Haven Hospital, the Southbury State Training School and the Vocational Counseling Service of New Haven is greatly appreciated.

In the following paragraphs, the procedure and results will be discussed in connection with each of the three purposes of the standardization.

Selection of Items.—On the basis of results obtained during the standardization, certain items were eliminated and others retained. The criteria used in selecting the items to be retained were:

1. Ease and objectivity of scoring.
2. Differentiation in average Wechsler-Bellevue score between persons passing and failing the item.
3. Lack of ambiguity.
4. Range of difficulty within each sub-test.

By application of these criteria the items were reduced to the numbers specified above. The particular items used will be presented below in connection with instructions for administering the test.

Scoring Standards.—After a preliminary discussion of scoring standards, each response was scored independently by two of the authors. They then conferred about all the responses on which they disagreed or which either of them had marked as questionable. For each item in the final form of the test, standards were formulated which expressed the criteria to which the scoring conformed and which could be followed by another person. These standards, together with examples, are presented in the section on scoring. The same standards, which, of course are chosen arbitrarily, must be used in the scoring since the interpretations are based upon them.

Relation to Wechsler-Bellevue Scores.—For the 150 subjects used in the standardization, the correlation between the score on the P. T. I. and the total weighted score on the Wechsler-Bellevue test was +0.90. The magnitude of this coefficient would be misleading, however, if it were taken as representative of the general population, because our 150 cases were selected to have a disproportionate number of extreme cases, and this fact of course tends to inflate the correlation coefficient.³ Two devices were used to estimate the correlation between the two tests for the general population.

1. The variability (standard deviation) of Wechsler-Bellevue total weighted scores

for a sample of the total population, selected according to age in the same proportions as our sample, was estimated at 22.5.⁴ We then determined the number of cases which must be removed from each of the more extreme score intervals in order to yield an approximately normal distribution with a standard deviation of 22.5. The appropriate number of cases was then removed at random from each score interval. There remained a sample of 104 cases. The correlation coefficient expressing the relation between the two tests was then computed directly for this sample and was found to be +0.74.

2. From our observed data and an estimate of 22.5 as the standard deviation of Wechsler-Bellevue scores for the general population, the correlation coefficient was estimated for the population by a conventional statistical formula;⁵ the estimate so obtained was +0.79.

The value of this brief test for predicting Wechsler-Bellevue scores is, then, rather high. Our estimated correlation (between 0.74 and 0.79) compares quite favorably with values found in other published reports of the use of short tests to predict Wechsler-Bellevue scores. Lewinski(3) compared scores in the Kent Oral Emergency Test and the verbal battery of the Wechsler-Bellevue, for 290 "psychopathic and subnormal" naval recruits, and found a correlation of 0.73. In another study of 100 naval recruits, Lewinski(4) reports a correlation of 0.65 between Group A of the Herring Binet and the Wechsler-Bellevue Verbal Scale. Goldfarb, as cited by Wechsler(8, p. 134), examined 108 male adults and 60 female adults with the Otis Self-Administering (20 minute limit) and the Wechsler-Bellevue Full Scale, and correlations of 0.73 and 0.53 respectively, were found for these data. The exact values of these various correlation coefficients cannot meaningfully be compared, however, because of the probably differing variabilities of the samples studied.⁶

³ This estimate was based on the data appearing in Table 14, p. 118, of Wechsler's manual(3).

⁵ See Peters and VanVoorhis, formula 131, p. 210(5).

⁶ Correlations from 0.76 to 0.97 have been reported(2, 6, 7) between selected combinations of subtests of the Wechsler-Bellevue and the entire

³ For clarification of this point see, e. g., Peters and VanVoorhis, pp. 208 ff.(5).

Correlations of this general magnitude mean that the prediction can be only very rough. We do not believe it wise to use this or any other short test as a basis for making a quantitative statement predicting an exact score on the Wechsler-Bellevue. The designation of broad categories is all that seems appropriate. Our recommendations about how this should be done will be presented in the section on the use of the test.

THE PRELIMINARY TEST OF INTELLIGENCE AND ITS ADMINISTRATION

The test should be administered in a situation which is as free as possible from distraction—preferably in a room alone with the subject. An examiner should at first record the responses verbatim, as it will be necessary to compare the responses later with the scoring standards in order to score them accurately. Recording should be as unobtrusive as possible and never in a situation where the subject may see what the examiner is writing. Later, when the examiner is experienced with the scoring standards, he may be able to score as the test progresses, without recording the responses. It may still be desirable to record certain responses because of an interest in their qualitative nature as well as their quantitative score.

Test questions may be repeated where requested by the subject; but the wording of the question should in no case be altered except as suggested in the detailed instructions below. Where the subject's response is ambiguous or when the examiner for some reason believes the subject capable of a better answer, the examiner may say, "Please explain further," or "Tell me more," etc. Such prompting should be given only once on any one test item.

Phrases have been suggested at the beginning of each test as transitions; if the examiner finds them awkward or unnatural, other such phrases may be substituted, but the test questions themselves should always

test in an effort to devise a "brief Wechsler." These correlations are irrelevant to our present purpose, which is the tentative prediction of Wechsler-Bellevue scores without necessitating the "using up" of any items on that test.

be asked as they are printed here. Encouragement and praise should be given when it seems advisable. In general, the examiner should not indicate to the subject whether or not his responses are correct. Extraneous conversation should be limited as much as possible during the test administration.

VOCABULARY

"Now first I'm going to ask you the meaning of some words. What does . . . mean?" or "What is a . . . ?" If any response is ambiguous, say, "Please explain," "How do you mean?", etc., but give no further help. If two successive items are clearly failed, remaining vocabulary items may be omitted.⁷

1. Saucer. 2. Temperature. 3. Immune. 4. Infallible.

(1 point is allowed for each correct answer; the maximum score is 4. For scoring standards, see below.)

ARITHMETIC

"Now I'd like to ask you some arithmetic problems." If item 1 or 2 is failed, the remaining arithmetic items may be omitted.⁸

1. "How much is 3 apples and 4 apples?"
2. "If a man drives his automobile 160 miles in 4 hours, what is his average rate of speed?"
3. "A man receives \$20 interest from a savings account in the bank. If the rate of interest is 2%, how much money does he have in the account?"

(2 points are allowed for each correct answer; the maximum score is 6.)

COMPREHENSION

"Now tell me . . ." If the response to the second item is ambiguous, say, "Please explain," "How do you mean?", etc., but give no further help. The second comprehension question should be asked even if the first one is clearly failed.

1. "Why do we wear clothes?"
 2. "Where is the sun in the middle of the night?"
- (Each item is given either 0, 1, or 2 points. The maximum score is 4. For scoring standards, see below.)

SIMILARITIES AND DIFFERENCES

"I am going to name two things and I want you to tell me first how they are alike (or the same) and then how they are different." If on any item, the subject omits either the similarity or the difference, say, "And how are they the same (or different)?" If the subject cannot state a good

⁷ Of the 150 persons in the standardization group, not one passed a later vocabulary item after having failed two of them.

⁸ Of the 150 persons in the standardization group, not one passed a later arithmetic item after having failed an earlier one.

similarity for the first item, say, "Well, when asked how they are alike you might say that a chair and a table are both used for eating, or that they're both made of wood, or that they're both pieces of furniture." Give no further illustrations. The second item in this subtest should be asked even if the first one is clearly failed.

1. *Chair and table.*

2. *Pity and sympathy.*

(On each item, correct statement of a similarity receives 1 point, and correct statement of difference receives 1 point. Credit is to be given for correct statement of similarity even if statement of difference is wrong, and vice versa. The maximum score is 4. For scoring standards, see below.)

INSTRUCTIONS FOR SCORING THE TEST

VOCABULARY ITEMS

Each item is scored either 1 or 0.

1. *Saucer.*—Any response is accepted which either defines or gives a use of a saucer.

Examples of answers from the standardization group which were scored right: A dish. A plate. Thing that goes under a cup. Something to catch the coffee in. You drink something out of it. Part of a tea cup. You put salt in.

2. *Temperature.*—The answer must contain at least one of the following ideas: (1) degrees of heat (even if expressed so simply as "how hot it is"); (2) difference between hot and cold; (3) heat as a property of an object. Failure to mention one of these, or mention along with clear confusion with "thermometer" is scored as wrong.

Examples of right answers: Degrees of heat, different points of heat. How hot something is. When you are hot or cold. What we use to record heat, it is relative, hot or cold. The heat of something.

Examples of wrong answers: Warm, heat. Degrees. You see if it's cold, you have it outside the window in the winter time, see how cold it is. Heat temperature, body temperature, something up or down. Pertaining to heat. Is to do with your fever, how high or low it is; in sickness take your temperature and determine how ill you are. Two; for the weather and people take; have fever; weather; when it is cold or warm; means what people take for colds.

3. *Immune.*—To be scored as right, the answer must contain the idea of protection, safety or lack of susceptibility rather than mere absence of disease, etc.

Examples of right answers: Free from, not able to catch. To be protected from. Safe from contagion. Not susceptible to. If immune from anything, means you wouldn't get it. A person that can't catch a disease.

Examples of wrong answers: Don't get sickness or disease. Free from. Impossible to acquire. Nothing bothers you. Have no feeling for what is bothering you.

4. *Infallible.*—The answer must contain the idea of being incapable of erring or failing. The examples will indicate what a variety of specific ways

of expressing this idea are acceptable. The examiner must particularly watch for a confusion between infallible and true, faultless, free from sin, or perfect.

Examples of right answers: Incapable of being wrong. Unerring. Doesn't fail. Something that is infallible is true, quality of it can't be denied; a test that's infallible is honest or known to work all the time. Person can't make a mistake.

Examples of wrong answers: Without error; not false. Can't be questioned. A certain tested doctrine or law that is proven valid. Practically perfect. Without fail. Person who seldom makes mistakes is infallible.

ARITHMETIC ITEMS

No credit is given on the arithmetic items for any response other than the correct answers of 7 apples, 40 miles per hour and \$1000. Correct answers receive 2 points apiece.

COMPREHENSION ITEMS

Each of these items is given a score of either 0, 1, or 2 points.

1. *"Why do we wear clothes?"* One point is given for statement of any acceptable reason. Two points are given if two or more kinds of reasons are given, out of the three kinds listed below. If two or more of the reasons are given and they are all of a single kind, only one point is allowed.

Kinds of right answers, with examples:

(1) For protection: Use them against the elements of nature. To keep warm. To protect you from the sun. Keep dust and germs off.

(2) For modesty, or because demanded by custom: To cover our nakedness. To protect decency. We are ashamed. Demanded by the mores. Wouldn't be nice if you went around outside all naked.

(3) For adornment: Looks. To get dressed up.

Examples of answers scored zero: Somebody will see what we look like. Because of laws of nature; (?) because everyone else does; if we didn't we would go against law; of nature. Just tradition that started and we keep wearing them. Because it's the civilized way; also have to wear clothes; (?) because couldn't go without; it's just a . . . I can't explain. To cover up ourselves. It's human nature to wear clothes; it's the thing to do; (?) thing we have been doing all our lives. Because we don't want to be naked and we don't want to die from hunger and thirst. (Spoiled)

2. *"Where is the sun in the middle of the night?"* An answer is scored 2 points if it includes the idea that the sun remains in the same place (even if it also includes the erroneous statement that the earth revolves around the sun in 24 hours). Lacking this idea, an answer is scored 1 point if it indicates clear understanding that the sun is shining on the opposite side of the earth (or some specific place there).

Examples of answers scored 2: On the other side of world; always in one spot; seems to move.

Just where it is during the day time. We say it has traveled into shadow of earth, other side, earth goes around sun, actually sun is in same place; earth in 24 hours turns around so when we see sun merely means we have turned so much.

Examples of answers scored 1: On the opposite side of world. Sun is directly below our zenith. About right: down under and half way round the world. China.

Examples of answers scored 0: Some other part of the earth I guess. I haven't found out; somewhere beyond the horizon; on the other side of the earth. Must be down. Sun goes down and moon comes up; (?) beneath earth. Oh, might be over in China; it doesn't stay in one place; stays here in day and over in China in night time. Sun revolves and goes down in west and up in east in morning; revolving around earth.

SIMILARITIES AND DIFFERENCES

Each similarity and each difference is scored either 1 or 0, so that the maximum score is 4.

1. *Chair and table.*

a. Similarity: Any general or concrete statement of a respect in which a chair and table are similar (*e. g.*, form, purpose, material, classification) is scored correct, even if only approximately accurate.

Examples of right answers: Both needed for eating dinner. Both have legs. Both made of wood. Both furniture.

Examples of wrong answers: Legs might be alike. Belong to each other. Both members of a set. Not alike. Alike in that they are both usable. Could be same color or style of furniture.

b. Difference: 1 point is given for any general or concrete statement of a respect in which chair and table are different (*e. g.*, purpose, form), except qualitatively inferior or false contrasts such as are listed below as examples of wrong answers.

Examples of right answers: Chair, sit on; table don't. Eat off table; sit on chair. Different because one is used to sit personal self on, other is used to sit dishes, etc. on. One's to sit in and the other is to put ornaments on.

Examples of wrong answers: Chair you sit on to be near table. One higher than the other, table higher. Table much bigger than chair. Have a different shape. One has a back, one has a top. One has a back and legs, other just a top and legs. Difference is a chair's a chair, a table's a table.

2. *Pity and sympathy.*

a. Similarity: Any explicit generalization that is at all reasonable is scored as correct.

Examples of right answers: Both emotions, sentiments, directed by one individual toward another. Both mean to be sorry. Feeling for someone, any feeling. Both emotions of one toward a sufferer. Have kindly feelings, both excite feeling of kindness and interest in assisting. Alike in a feeling way. Bestowed upon another's welfare or misfortune. Both taking an interest in someone else.

Examples of wrong answers: Means of comforting. They're different. Naturally we have sym-

pathy; one follows another. When you have pity for anybody, you sympathize with them; if they did something that wasn't right you would pity them; if they did something to somebody else you would sympathize.

b. Difference: Any of three points are accepted as correct in making this differentiation: (1) Pity involves contempt or feeling of superiority, etc. (2) Sympathy involves more empathy or greater participation with another person. (3) Sympathy may be in response to the pleasure as well as the pain of another person.

Examples of right answers: Pity stronger than sympathy; you can be in sympathy with a person even if it's a pleasure; in pity, some misfortune has occurred. Pity connected with contempt; whereas sympathy may imply respect. To pity someone is to be sorry for them, to sympathize with someone is to be sorry with them. Pity is an emotion directed at a person; sympathy is an emotion shared with a person. Different in that in one we have compassion, understand his feelings; pity we feel sorry for, superior to, with compassion.

Examples of wrong answers: Pity is really not personal; sympathy is more personal. Sympathy is sincere interest in other's welfare; pity, you thank God it's not you. When you pity a person, you have some kind of disgust in it; sympathy is something on a higher plane.

When answers to various test items are not clearly "right" or "wrong" by these scoring standards, the examiner must use his judgement.

INTERPRETATION AND CLINICAL APPLICATION

The proper use of any rapid method of determining intellectual status, as we have already indicated, is confined to assigning a patient to one of several broad categories. We have chosen four categories: above average, average, below average, and markedly below average. The user of the test should, in his own mind, prefix "probably" to each of these labels, for with a brief test it is of course impossible to attain the degree of certainty that may be possible with a long test.

In order to assign a patient to one of these four categories on the basis of the P. T. I., the norms given in Table II should be used. In consulting these norms the patient's age and his total score on the brief test are all the information needed. The table then gives the interpretation. In the age range from 17 to 29 years, for example, a score of 11 would indicate average performance and a score of 4 would indicate markedly below average performance.

It will be noted that, because of changes with age in test performance, the interpretation of any given score may vary according to the age of the patient. For example, a score of 7 is interpreted as below average if achieved by a person in the 17-29 or 30-39 age groups, but is interpreted as average

Bellevue I. Q.'s, we have exhibited the relationship, for our 150 cases, in Table III. Considering the general fallibility of predictions based on very brief tests, we believe these results are highly satisfactory.

There are obvious limitations to the use of any brief test of intelligence. It would be

TABLE II

TENTATIVE NORMS FOR THE INTERPRETATION OF SCORES ON THE
PRELIMINARY TEST OF INTELLIGENCE

	Age	17-29	30-39	40-49	50-59	60-69
Above average	13 or above	13 or above	13 or above	12 or above	12 or above	12 or above
Average	9-12	8-12	7-12	6-11	5-11	5-11
Below average	7-8	6-7	4-6	3-5	2-4	2-4
Markedly below average*..	0-6	0-5	0-3	0-2	0-1	0-1

* The interpretation of scores in this category will vary according to other information available about the subject. Scores this low might be due to feeble-mindedness, psychological deficit, inability or refusal to cooperate, etc.

TABLE III

DISTRIBUTION OF WECHSLER IQ RATINGS WITHIN
EACH CLASSIFICATION OF SCORES ON
THE P.T.I.

I. Q.	Above average	Average	Below average	Markedly below average
135-139.....	2	..	..	..
130-134.....	3	..	..	..
125-129.....	9	..	..	..
120-124.....	6	3	..	..
115-119.....	11	3	..	..
110-114.....	8	5	1	..
105-109.....	4	11	..	..
100-104.....	3	13	..	..
95-99.....	..	10	..	..
90-94.....	..	7	2	..
85-89.....	..	2	3	..
80-84.....	..	4	2	2
75-79.....	..	..	3	2
70-74.....	..	..	4	1
65-69.....	..	..	2	4
60-64.....	..	..	1	6
55-59.....	..	..	..	3
50-54.....	..	..	..	1
45-49.....	..	..	..	2

in the older age groups. Similarly, a score of 12 is interpreted as average for persons of 49 years or younger, but as above average for those of 50 years or older.

These norms are referred to as "tentative" because as more data becomes available, they may be slightly changed. We believe them to be the most satisfactory norms possible on the evidence obtained from the 150 cases in the standardization group. In order to show how well the interpretation of scores on the P. T. I. corresponds with Wechsler-

unjustified, for example, to make a clinical diagnosis of feeble-mindedness on the basis of this test alone. Because of its highly verbal content, it will not be useful with individuals with aphasic or other language difficulties. The test will also not be useful in situations where fine discriminations of differences in ability are required or where interest is centered in mild disturbances of intellectual function. In many cases, however, the psychiatrist is not interested in whether his patient has an I. Q. of 100 or 110. He may merely wish to know whether or not his patient's intelligence is significantly above or below average. In such cases this test offers a more reliable index than the usual non-standardized methods.

The test may also prove useful as a screening device for selecting those patients who should be referred to a clinical psychologist for a more thorough examination.⁸

⁸ It is interesting in this connection that one item of the test seems unusually successful in screening out subjects who are not below average in intelligence. According to these results, any subject who can successfully differentiate between pity and sympathy (according to the standards of scoring which have been described) is almost certainly not below average in intelligence and is probably above average. Of the 17 people in our group who succeeded with this item, none had Wechsler-Bellevue I. Q.'s below 111. Ten of the 17 had I. Q.'s above 120. Failure to succeed with this item does not mean, of course, that the individual is in any way deficient in intelligence; among our subjects with I. Q.'s of 111 or higher, there were 33 who did fail on this item.

If the results of the brief test indicate that the patient's intelligence is probably average, there may be no need for referral for a more complete examination unless the test results are at variance with the psychiatrist's clinical impression. Patients who receive scores which are below average might be routinely referred to a clinical psychologist. Deterioration of intellectual function, of course, cannot be reliably determined by this test. Any marked discrepancy between ratings on this test and capacity indicated by the patient's occupational and educational history and by other aspects of his behavior, should probably be considered cause for referral for a more thorough check on the possible presence of deterioration.

Qualitative analysis of the subject's response is often useful in psychiatric evaluation. Such analysis may be made of the responses to these questions just as well as of the responses to unstandardized questions. During the administration of the test it may be possible, for example, for the experienced clinician to make observations on attention-defect, preoccupation, lack of confidence, self-deprecatory trends, etc.

The test should prove useful to examiners for whom psychological service is not available. In this situation, it should be supplemented with other information which may be indicative of intellectual level, namely: school record, educational level achieved and occupational status.

SUMMARY

A brief test of adult intelligence designed for psychiatric examiners is reported. The test (Preliminary Test of Intelligence) consists of vocabulary, comprehension, similarities and differences, and arithmetic items

and can be administered and scored in 5 to 15 minutes. Preliminary standardization data on 150 subjects ranging in age from 11 to 70 years show satisfactorily high correlations with the Wechsler-Bellevue Intelligence Scale. The test, together with complete instructions for administration, scoring and interpretation is included in the text. Tentative norms permit the classification of intelligence level in one of four categories: above average, average, below average and markedly below average. The I. Q. range within each category for the standardization group is reported.

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AN EXPERIMENTAL STUDY OF MENTAL PATIENTS THROUGH THE AUTOKINETIC PHENOMENON

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Markedly wide differences among persons have been found in the autokinetic phenomenon. In previous reports (15, 16) the writer has offered the suggestion of using this phenomenon as a projective measure of differences in personality structure. In this paper the application of this method in personality testing is presented to show some diagnostic and prognostic possibilities in mental cases.²

The phenomenon is visual in character and can be observed readily by looking at a stationary pin-point light from a short distance, and for a period of time, in an otherwise totally dark room. It manifests itself by multi-directional movement of the small light, varying in course, extent and speed. Maximally, the movement may appear so extensive that its recording by the subject on a large graph board may extend from border to border. Some individuals see only limited movement, while some see none. The extent and pattern of movement is fairly constant for a given person. Retests of 25 or more normal subjects have shown a rank difference correlation of +0.96 as measured by indices later to be described. Although mention of the autokinetic phenomenon is seldom found in current text books on psychology and related subjects, scientific investigation of it as an interesting psychological reaction dates back a considerable number of years. Charpentier (6), Exner (7), Aubert (2), and others were among the earlier investigators. More recently Carr (5), Adams (1), Hovland (9), Guilford and Dallenbach (8), Schilder (14), Sherif (12, 13), Haggard and Rose (10), Kleint (11) and others have given it attention. Theories regarding the illusion have varied rather widely, ranging from explanations centering

around local eye functions to those emphasizing extensive body tensions and body tonus, with central functions predominating. Kleint believes to have found autokinesis, not only in the visual sense but also in the auditory and tactual fields. Thus far causal explanations have not progressed beyond the theoretical stage, and remain so in our investigation. The theories of local eye functions have, however, been generally discarded for those emphasizing central mechanisms.

In using autokinetic movement as a means of studying personality traits the theoretical assumption is made that through this subjectively induced mode of perception characteristic personal differences can be revealed in respect to the form in which reality orientations occur in the general cognitive activities of the individual. Unlike some projective tests, content is not expressed through autokinetic movement. This, it would seem, serves the useful purpose of arriving at a relatively pure or simple form of perception without the modifying effects of extraneous material. Applying this technique to mental patients the assumption is made that, inasmuch as syndrome differences are known to be related to personality differences, various forms of autokinetic reactions can be expected to furnish useful diagnostic pointers, and supplement and further verify the findings of diagnostic tests already in use.

EXPERIMENTAL PROCEDURE

Tests were given to 845 patients. Of these, 13 were patients at the State Epileptic Hospital at Parsons, Kansas, and 91 were resident patients at the Menninger Clinic.³ The data obtained in the Topeka State Hospital have come mainly from newly arrived acute patients who were tested as soon as feasible.

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² Some preliminary summary accounts of the present investigation have been given in the biennial reports of the Topeka State Hospital of 1940, '42, and '44.

³ The writer is greatly indebted to Dr. Karl Menninger and Dr. W. C. Menninger and their staff for their helpfulness in making possible some of the earlier portions of this study at the Menninger Clinic.

Chronic patients were used whenever necessary to expand evidence in some particular class of disease. The ages of subjects ranged from 14 to about 70 years. The investigation covers approximately the past seven years, though some of the preliminary work at the Menninger Clinic dates to several years earlier. This coverage in time has afforded the opportunity to gain longitudinal as well as cross-sectional views of the courses the diseases of tested patients have taken. Fifty-four patients were retested to determine the reliability of the test, and 100 patients receiving metrazol shock treatments were retested periodically to determine whether changes in autokinetic perception occur under shock therapy.

APPARATUS AND TEST PROCEDURE

The equipment consists of a small light-tight box, approximately 7"×9"×7", containing a bulb of low wattage suitable for 110 volt current. There is a small pin-point aperture, 1 mm. or less, at one end of the box which can be covered with some red tissue to reduce the intensity of the light. For recording purpose a large graph board is supplied, 22"×28" in size. Any clear sheet of paper the size of the board serves as a recording sheet. The paper is held in place by small nails protruding from the rim of the board over which is placed a wooden protective frame about 1½" in width, and in all the same size as the graph board. A shield is placed in front of the stand on which the light box is mounted to conceal its construction.

During the ten minute test period, the patient sits at a small table provided for the graph board, and about ten or twelve feet from the light, and directly facing it. He is told that the test will be ten minutes in length, that the room will be dark but the door not locked, and that the person giving the test will stand outside to keep time. He is told to hold his pencil in readiness at the center of the board, to keep his eyes constantly on the light during the test period, and to hold his head as steady as is comfortable. He is further instructed that if the light begins to move he is to move his pencil around on the board in the directions and at the same speed the light goes, and to con-

tinue as long as the light moves. Each time movement stops a heavy dot is to be recorded and then movement continued from there when it occurs again. Intentional returns to center are to be made only when movement happens to lead out of bounds against the frame at the edge of the board. Such returns are to be made by raising the pencil back to a guessed center. The patient is clearly instructed not to move his pencil as long as he sees the light in a stationary position straight ahead. For best results it must be emphasized that the test room be totally dark to avoid visibility of anything which might serve as an orientation pattern with the light. Keyholes, doors and windows must be completely checked for possible light infiltration. With psychotic patients the exact manner of giving instructions must necessarily vary a little, depending on the individual. With some it becomes necessary to be very specific as to direction on the charting board—"up," "down," "to the left," etc., and to insist that stops, if they occur, be recorded by a heavy dot, and not merely by a pressure of the pencil. Obviously, disturbed or very confused or deteriorated patients cannot be tested. None of our patients has become violent or destructive during the test performance. With some patients receiving shock treatments and who were non-cooperative at first, good test results were obtained after the first few shocks had been given. After each test it has been the practice to question the patient briefly to verify that he had understood and performed the test correctly. Fear of the dark room is much less frequent than might be expected—only a very few have expressed such fear.

GRAPH PATTERNS AND MEASUREMENTS

Autokinetic movement assumes a great variety of patterns. Where only small amounts of movement occur the action may be for only a brief interval of time, or it may be sporadic, frequently interrupted by stops. Some movement can be described as erratic, showing many reversals of direction; very irregular distribution of stops; unexpected sudden runs possibly interrupted, then, by unusually long stops; repeated running out of bounds; and pendular-like hor-

izontal swings, with stops usually occurring at the extremities of the movement. In cases where such horizontal swings occur it has not infrequently been found, both among normal subjects and patients, that there is a left hand dominance or a history of handedness reversal. Also more frequently associated with such swinging movement patterns is stammering, active at the time, or a history of such speech difficulty. Where extensive movement is seen stops as a rule become less frequent and the path of movement often assumes long sweeps with less directional changes. Individuals capable of experiencing extensive movement also often have the ability to voluntarily control its direction. Such ability becomes less frequent among those limited to less extensive movement.

In an earlier paper (16) a more detailed account and rationale of the method of graph measurements was given. The essentials are here summarized: An index figure is calculated for each test record to provide a simple convenient basis for comparing individual differences. In comparing autokinetic records in our preliminary studies with established personality tests, mainly Rorschach, the best differentiations of personal differences could be obtained, not only through the measurement of the length of the path of movement, but also by taking into consideration the maximum expanse of the graph; the maximum deviation from center; and the number of stops occurring in the course of the movement. The formula used for calculating the index of a graph is:

$$\sqrt{\frac{L \times DC \times ME}{(S+1)}}$$

in which L=the total length of path of movement; DC=maximum distance attained from center; ME=maximum expanse of the graph, that is, the distance between the two points farthest apart in the graph, and S=the number of stops. All linear measures are in centimeters. Since stops may be viewed as a psychological reciprocal of movement their number (S) was used as the denominator in the formula with the integer 1 added to insure a denominator. (As a practical mathematical procedure, where a metric rule is not available, linear measure-

ments can be done in inches and then the final index figure, as obtained by the above formula, multiplied by 4 to equate with indices arrived at through metric measurements.)

EXPERIMENTAL FINDINGS

DIAGNOSTIC ASPECT

Reference to Table I will show autokinetic indices listed in a two column arrangement, according to greater and lesser movement, as they relate to various psychiatric syndromes. For the more common psychoses and neuroses, where fairly sufficient numbers of cases were tested, histograms, Figs. 1 to 3, and 5 to 8, are presented to show detailed distribution of indices. Fig. 4 shows distribution of indices in the normal population. Since indices are arranged in the histograms in steps of five an asterisk has been used in the first column to distinguish the number of zero indices (no movement) from those indicating the small extent of movement recorded in the first step. The index figure 10, used in Table I to differentiate greater from lesser movement was empirically chosen as approximating the most consistent and regular point of demarcation between the autokinetic performance of manic-depressive patients and the various types of schizophrenics, as also between the conversion hysterics on the one hand and those with other forms of neuroses (psychasthenia, neurasthenia, mixed neuroses, and anxiety neuroses).

Distinct group differences in autokinetic reactions are evident from the distribution histograms and from the figures in Table I. The manic-depressive group has a notably larger percentage of no-movement reaction than schizophrenics, and patients with conversion hysteria give, on the average, distinctly different reactions from those found in other listed forms of neuroses. Among those exhibiting tendencies toward lesser or no movement are also to be found the involutional psychoses, the psychoses due to cerebral arteriosclerosis, paretics and alcoholics. In contrast, epileptics trend markedly in the direction of movement. It is of special interest that the paranoid schizophrenias represent the only clinical group in which a 50-50 distribution is found.

Chi² computation of the differences be-

tween all manic-depressives and all schizophrenics in Table 1 shows χ^2 (d.f.=1) = 69.8, with a significance of $<<<1\%$. A similar χ^2 comparison between conversion hysterics as one group and the other neuroses of Table 1 gives χ^2 (d.f.=1) = 21, with a significance of $<<1\%$.⁴

One of them showed pronounced change in reduction of movement, the others remained approximately the same.

ATYPICAL CASES

The method used to gain some added information on cases exhibiting atypical auto-

TABLE I
DISTRIBUTION OF AUTOKINETIC INDICES AS TO CLINICAL TYPES

Diagnosis by staff	Number and percentage of cases				Totals
	Indices 0 to 10		Indices above 10		
Manic-depressive, manic*	88	74%	31	26%	119
Manic-depressive, depressed*	107	72.8%	40	27.2%	147
Manic-depressive, mixed type*	9	82%	2	18%	11
Involuntional melancholia	19	82.6%	4	17.4%	23
Involuntional paranoia	5	83%	1	17%	6
Catatonic schizophrenia*	34	29.3%	82	70.7%	116
Hebephrenic schizophrenia*	14	37%	24	63%	38
Paranoid schizophrenia*	27	50%	27	50%	54
True paranoia	3	100%	0	0	3
Paranoid condition	3	60%	2	40%	5
Simple schizophrenia	3	30%	7	70%	10
Unclassified and mixed schizophrenia	6	54.5%	5	45.5%	11
Epilepsy	3	14.3%	18	85.7%	21
Paresis	27	62.8%	16	37.2%	43
Psychosis with cerebral arteriosclerosis	17	100%	0	0	17
Conversion hysteria*	35	77.7%	10	22.3%	45
Psychasthenia*	5	23.8%	16	76.2%	21
Neurasthenia*	2	20%	8	80%	10
Anxiety neurosis*	3	37.5%	5	62.5%	8
Mixed neurosis*	3	43%	4	57%	7
Psychopathic personality	10	58.8%	7	41.2%	17
Alcoholics*	32	61.5%	20	38.5%	52
Psychosis with mental deficiency	7	77.7%	2	22.3%	9
Psychosis due to metabolic, endocrine, etc., disturbances	9	75%	3	25%	12
Essential hypertension	5	83.3%	1	16.7%	6
Unclassified psychosis	21	61.7%	13	38.3%	34
Totals	497		348		845

* Please see histograms, Figs. 1 to 8, for complete details of indices distribution.

TEST RELIABILITY

Retests of 54 patients chosen at random and compared with original indices by the rank difference method produced a correlation + 0.92. (See Fig. 9.) These retests were given without intervening shock treatment, and some of them as much as a year or more after the first test. Under shock administration radical changes sometimes occur in autokinetic movement. This will be discussed later. Among normal subjects a few test records have been obtained in retests as much as 8 to 10 years after the first tests.

⁴ A percentage significance of 1 or <1 means that there is only one, or less than one, chance in a hundred that the obtained experimental difference could have arisen by chance.

kinetic characteristics in a given clinical classification was to study the detailed diagnostic opinions of individual staff members. It was found, first, that when only cases were considered in which unanimous diagnostic agreement existed in the staff autokinetic indications became more typical for a given clinical category. To cite a few instances; instead of the 74% for manics in Table 1, an 81% was obtained. Percentages in depressions and involuntional melancholias were similarly increased. Catatonics increased from the 71% in the table to 83%—hebephrenics similarly; conversion hysterics, 78% to 94%, etc. In general such increases ranged from 5% to approximately 15% in favor of the typical trend of the test findings. Grossly,

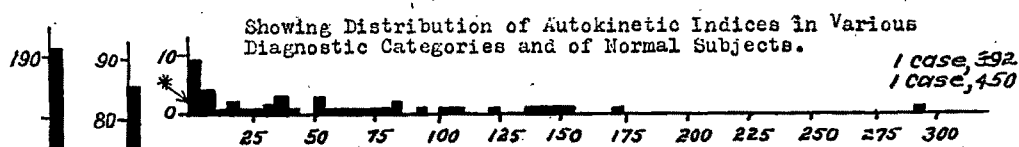


Fig. 1. Psychasthenia, Neurasthenia, Anxiety neurosis, and Mixed neurosis - 46 cases.

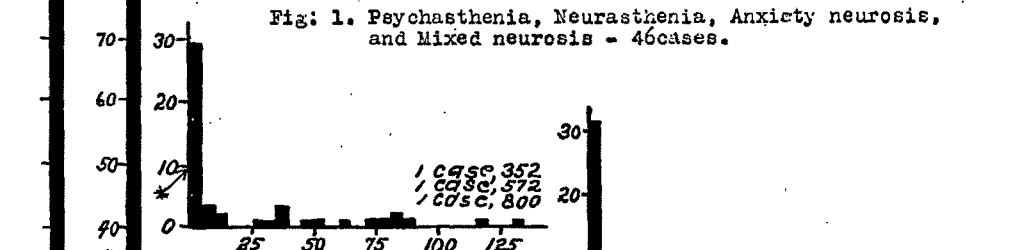


Fig. 2. Alcoholism - 52 cases.

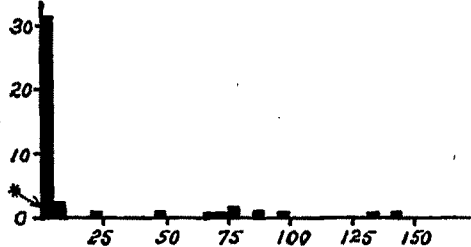


Fig. 3. Conversion hysteria - 45 cases.

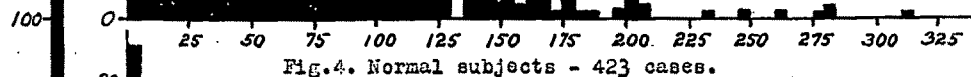


Fig. 4. Normal subjects - 423 cases.

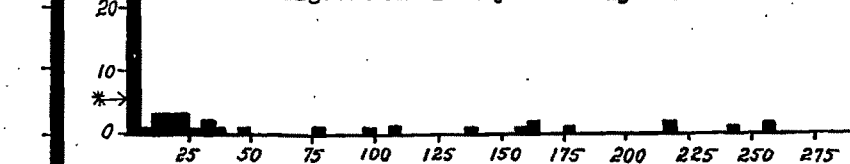


Fig. 5. Paranoid schizophrenia - 54 cases.

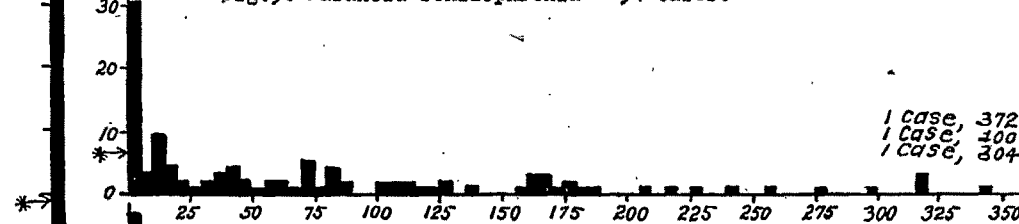


Fig. 6. Catatonic schizophrenia - 116 cases.

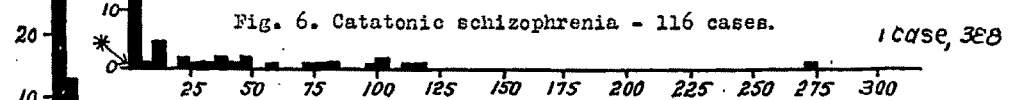


Fig. 7. Hebephrenic schizophrenia - 38 cases.

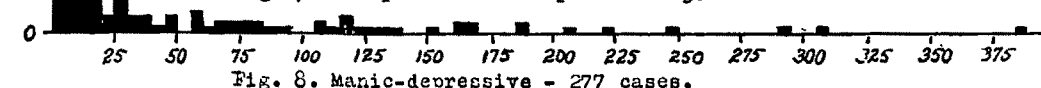


Fig. 8. Manic-depressive - 277 cases.

Number of cases indicated on the ordinates; autokinetic indices on abscissas.
Indices listed above the asterisks are zero (0).

diagnostic unanimity of the staff, as a rule, progressively increased as the typical (typical in autokinetic reactions) end of the distribution curve for a given clinical category was approached. Thus, *e. g.*, in Figs. 3 and 8, for hysteria and manic-depressives, there was greater unanimity of opinion at the positive or zero end of the curve than where indices were higher. In Figs. 5 and 6, for paranoid and catatonic schizophrenia, this was reversed.

In addition to comparing distributions of indices with unanimous diagnostic expressions of staff members it was found fruitful to consider dissenting or minority opinions as well. It was discovered that among those paranoid schizophrenics who saw little or no autokinetic movement (indices 0 to 10), but, who, as schizophrenics might have been expected to register movement, 29% were designated as manic-depressives by minority staff opinion. In contrast to this only 8% of the paranoid schizophrenics seeing more extensive movement (above index 10) were thus designated as manic-depressives. A similar condition prevailed for catatonics—39% with indices 0 to 10 were voted manic-depressives by a staff minority, while only 10% with higher movement indices were so designated. There was a similar, though not so pronounced, minority expression for hebephrenics. When manic-depressives were examined from the point of view of minority judgments the relatively few who exhibited movement above index 10 received a somewhat greater diagnostic designation of some form of schizophrenia—notably catatonia—than did those showing low indices. Also such terms as “schizoid personality,” “unclassified,” “unclassified schizophrenia,” “mixed manic-depressive” and “psychasthenia” were more frequently used by some in the staff to describe manic-depressives exhibiting movement.

Suicide attempts are more prevalent among manic-depressives with zero indices, and such attempts are nearly always of a forthright nature. The few who have succeeded in their attempts while in the hospital, and from whom tests had been obtained, all had shown zero indices. This pertains to the involutional melancholias as well. The impression has been gained that

among the depressives registering movement suicidal attempts are more often half-hearted and indirect, or more talked about than done.

PROGNOSTIC INDICATIONS

Early in the course of this study it became apparent that recoverability of patients seemed to have some categorical relationship to autokinetic propensities. A longitudinal view, extending over the past seven years or more, has shown that patients exhibiting only limited autokinetic movement present, in the aggregate, the best remission records, with even some disregard of the forms of psychoses involved. The delineation of this favorable group seems best expressed through indices 1 to approx. 50. The criteria for judging recoverability were paroles and restorations. Upon sufficient recovery patients at the Topeka State Hospital are at first paroled and then, after a lapse of a few months to a year or more are granted a restoration if their mental conditions warrant it. A “restoration” represents the more rigorous criterion of recovery. Table II shows some major clinical groupings in relation to conditions of recovery and autokinetic indices. (Under “paroled” are listed all patients who have at some time during this investigation merited a release from the hospital.⁵)

The general trend of Table II, with a few exceptions, demonstrates the more favorable prognostic weight that may be attached to a moderate showing of autokinesis. Either extreme—extensive movement or no movement whatever—seems to presage, on the average, a less favorable outlook for the patient. Of the two extreme reactions the latter presents the better record of recovery. In Table III Chi² computations for some of the numerically larger groups of Table II show the following:

Although neurotic patients as a whole have a slightly better restoration rate in the highest movement bracket, Chi² gives the figures for this group a relatively low sta-

⁵ Table II gives the account of patients at the Topeka State Hospital only. The terms here used as criteria of recovery were not clearly applicable to the release procedures at the Menninger Clinic; therefore the cases from that institution have not been included in this section.

TABLE II
SHOWING RELEASES AND RESTORATIONS OF PATIENTS WITH VARIOUS AUTOKINETIC CHARACTERISTICS

Autokinetic indices	(Paroles)						(Restorations)					
	0		1 to 50		Above 50		0		1 to 50		Above 50	
	* †	%	* †	%	* †	%	* †	%	* †	%	* †	%
All cases tested.	353 235	66.6	225 186	82.6	176 121	68.7	353 124	35.1	225 105	48.4	176 57	32.4
Manic-depressive, shock treatment.	51 46	90.2	24 24	100.	14 11	78.6	51 34	66.6	24 18	75.	14 8	57.
Manic-depressive, no shock.	103 79	76.7	46 44	95.6	21 18	85.7	103 41	40.	46 27	58.7	21 7	33.3
All schizophrenics, shock treatment.	32 24	75.	44 34	77.2	49 31	63.2	32 10	31.2	44 27	61.3	49 16	32.6
All schizophrenics, no shock.	27 9	33.3	23 13	56.5	34 15	44.1	27 2	7.	23 4	17.4	34 6	17.6
Catatonic schizophrenia, shock.	21 16	76.2	24 20	83.3	35 22	63.	21 8	38.	24 18	67.5	35 11	31.4
Catatonic schizophrenia, no shock.	6 2	33.3	8 5	62.5	20 9	45.	6 1	16.6	8 4	50.	20 3	15.
Paranoid schizophrenia, shock.	6 3	50.	10 7	70.	6 4	66.6	6 2	33.3	10 6	60.	6 2	33.3
Paranoid schizophrenia, no shock.	13 4	30.7	6 3	50.	7 3	43.	13 1	7.	6 3	0	7 0	0
Hebephrenic schizophrenia, shock.	4 4	100.	8 5	62.5	6 5	83.3	4 0	0	8 4	50.	6 3	50.
Hebephrenic schizophrenia, no shock.	8 4	50.	6 2	33.3	5 1	20.	8 0	0	6 3	0	5 1	20.
Paresis.	21 6	28.	12 7	58.	10 7	70.	21 2	9.5	12 6	16.6	10 2	20.
Conversion hysteria.	29 25	86.2	4 4	100.	8 8	100.	29 16	55.2	4 3	50.	8 5	62.5
Psychasthenia, neurasthenia, anxiety, and mixed neuroses.	1 1	100.	14 12	85.7	15 12	80.	1 1	100.	14 12	35.7	15 7	46.6
Alcoholics.	12 12	100.	10 10	100.	6 6	100.	12 7	58.3	10 7	70.	6 3	50.

* Total number of patients tested in the given category.
† Total number of patients paroled or restored in the given category.
NOTE—Only metrazol was used for shock treatments.

TABLE III
DIFFERENTIAL SIGNIFICANCE OF DISTRIBUTION OF CASES DERIVED FROM TABLE II

Groups compared	Indices, (0) : (1 to 50) : (above 50)	
	Chi ² (d. f. = 2)	Significance
Paroled : Not paroled (all cases tested).....	18.5	< 1%
Restored : Not restored (all cases tested).....	14.4	< 1%
Restored : Not restored (all manic-depressives).....	6.3	2 — 5%
Restored : Not restored (all schizophrenics).....	9.5	1 — 1%
Restored : Not restored (all neurotics).....	1.4	30 — 50%
Paroled : Not paroled (paretics).....	5.6	5 — 10%

tistical significance. Paretics elicit some special interest in that, despite the organic involvements, patients with autokinetic propensities of any degree apparently weathered the disease better than those displaying no movement whatever. This has been shown in a higher percentage of paroles of the former group and also in the fact that patients with zero indices had, as a rule, much longer histories of hospital residence. This is not to say that there were also such group differences in the serological findings—only psychological symptoms necessitating hospitalization are here considered.

An appraisal of the degree of chronicity of tested patients remaining in the hospital and those who have returned has shown that again those with medium indices present a better picture. More such patients than any others have been able to do some useful work on the wards or on the grounds, and participate in entertainments, whereas, the highest percentage of severe chronicity with accompanying deterioration and inability to perform any integrated activity was found among patients at one time showing extensive autokinetic movement.

Further prognostic inferences can be directly drawn from the patterns of autokinetic graphs, although their detailed significance cannot as yet be stated. It has already been mentioned that some patterns are more erratic than others, and these have been described in the section on graph patterns and measurements. In the major psychoses a comparison between restored patients and those remaining in the hospital or on protracted parole revealed that the restored group had a definitely smaller percentage of patients originally exhibiting erratic movements of various kinds. A similar comparison in the schizophrenic groups alone, where only the number of directional changes of movement were considered, showed an average of 11.3 changes for the restored group as against an average of 18.6 changes for the unrestored patients. The critical ratio for this difference was 2.65, indicating a fairly reliable difference. (A change of direction in movement was counted where the angle was approx. 90 degrees or less). It is worth noting, incidentally, that epileptics ranked highest in all psychotic groups in the number

of directional changes of movement—average 30.6. The limited number of epileptics tested, however, did not warrant critical comparisons with other groups.

AGE AND SEX DIFFERENCES

In the normal population age seems not to be of great importance in respect to the amount of movement a person sees. This was clearly shown when approximately 275 indices, obtained from the general population representing all ages, were later added to the distribution histogram of 149 indices obtained from predominantly young people of college age. The addition showed pronouncedly uniform increases in practically every step of the original distribution curve. In patients the age differences occurred somewhat according to diagnostic groups. There was, *e. g.*, a higher age level in manic-depressives than in schizophrenics, especially among first admissions, as could be expected from psychiatric knowledge. Within a particular group, however, age differences seemed not to be of great importance in the distributions of indices. In the aggregate women are prone to see less movement than men. Table IV illustrates this.

THE EFFECT OF SHOCK THERAPY

When patients who ordinarily perceive movement are given a series of shock treatments they not infrequently show very distinct reduction in movement upon retest, sometimes to the zero point. The number of shocks necessary to effect such reduction varies with individuals. As a rule a patient who does not see movement before shock, still records no movement after shock administrations. Retests were usually done a day or so after shock was given to avoid as much as possible residuals of mental confusion that might linger after shock. The cases here reported all received metrazol. Recently we have had the opportunity to observe patients treated by electroshock, and believe to find similar reductions of movement taking place under such form of treatment.

Fig. 9 shows test and retest indices of a control group of 54 patients chosen at random but not receiving shock. The 100 patients whose indices are recorded in Fig. 10

received shock treatments, varying in numbers. The tendency for movement to reduce upon shock is readily seen from a comparison of A and B in Fig. 10. No such pronounced reduction is noticeable in Fig. 9. In Fig. 10, B, a thinning out of indices after shock is noticeable in the area found, in our previous discussions on prognostic indications, to be the most unfavorable for recovery, namely the area of high indices. Against this, indices clustered more, after shock, in the more favorable areas of lower indices. For a given patient the relationship between

exploited experimentally, but which merit further brief discussion.

There is evidence that through autokinetic reactions something akin to extroversion—introversion is being manifested. This can be substantiated partly by observing the general behavior of subjects taking the test, and is supported further by the way syndromes in patients ranged themselves in relation to the test results. The perceptual realism which permits no seen movement of the experimental light is interpreted more easily as derived from extratensive, syntonic

TABLE IV
SHOWING DISTRIBUTION AND DIFFERENTIAL SIGNIFICANCE OF DISTRIBUTION
OF AUTOKINETIC INDICES OF MALES AND FEMALES

Autokinetic indices	Normal subjects				Patients			
	Males		Females		Males		Females	
	Number of cases	%	Number of cases	%	Number of cases	%	Number of cases	%
0	23	8.3	31	20.8	175	37.0	209	56
1 to 50	123	45.0	72	48.3	156	33.0	104	27.8
Above 50	128	46.7	46	30.9	141	30.0	60	16.2
Chi ² (d. f. = 2) = 17.66, Significance = < 1%					Chi ² (d. f. = 2) = 35, Significance = < 1%			

recovery and reduction of movement tends to be a direct and positive one. Furthermore, movement patterns sometimes undergo considerable modification, even when reduction is not so pronounced, so that where in the first instance movement may appear erratic, retests after treatments sometimes reveal a smoothing out of the path of movement. The tendency for reduction to take place would seem, theoretically, to be in the desired direction, and is in keeping with introspective reports received from patients as to the extroverting effects shock produces. As to the question whether reductions in movement remain so, a number of patients have been retested on the occasion of a return to the hospital on a recommitment, or possibly only a visit, and these have nearly all shown a gradual return to greater movement, approximating in some instances their original indices.

COMMENTS

Some impressions have been gained during the investigation which have not been

traits of the individual. It is in persons with such traits that the manic-depressive psychoses and conversion hysterias are more apt to occur, and possibly also the involuntary psychoses. In contrast, the subjective nature of autokinetic movement suggests that it is more commensurate with introversion, and hence also more readily to be found in schizophrenics. By analogy, at least, it would seem that the projective processes and the bizarreness in this form of illness, the inability to meet adequately the demands of reality, and the shifting of attention to subjective impressions with their autistic, unanchored proclivities all might find more fertile ground in autokinesis for their development. Periodically, subjects, both normal and psychotic, who were able to see extensive movement, have remarked spontaneously that they recognized in the pattern of movement their "way of doing things," or "the way I am." It sometimes has been observed that persons capable of seeing extensive movement find the experience a pleasant preoccupation. Such preoccupations seem,

as a rule, not so much concerned with any specific content of thought as with a general feeling tone, though sometimes content does come into the experience. Occasionally subjects state that they are able to synchro-

seem to have more such ability than patients with similar indices. Subjects who see no movement give somewhat different reports. They frequently notice changes of brightness, intensity, and hue, changes of shape of

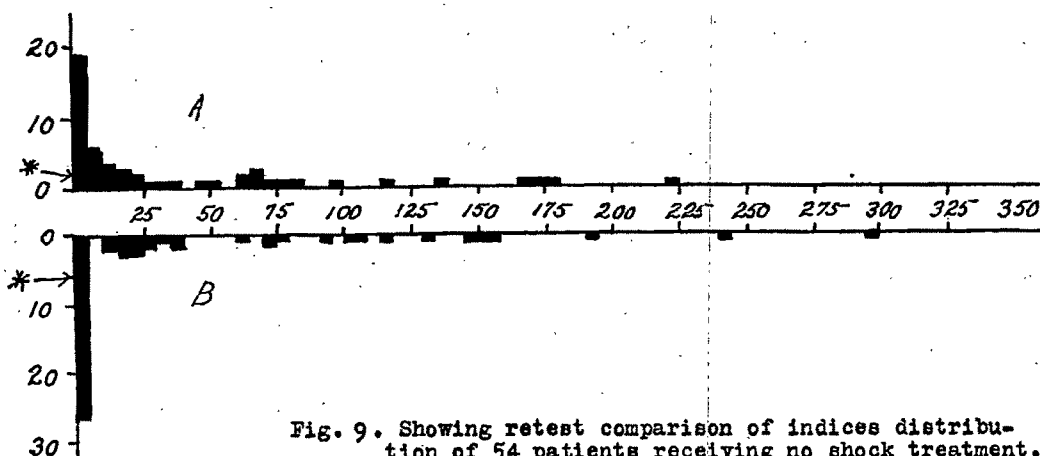


Fig. 9. Showing retest comparison of indices distribution of 54 patients receiving no shock treatment. A = first test, B = second test.

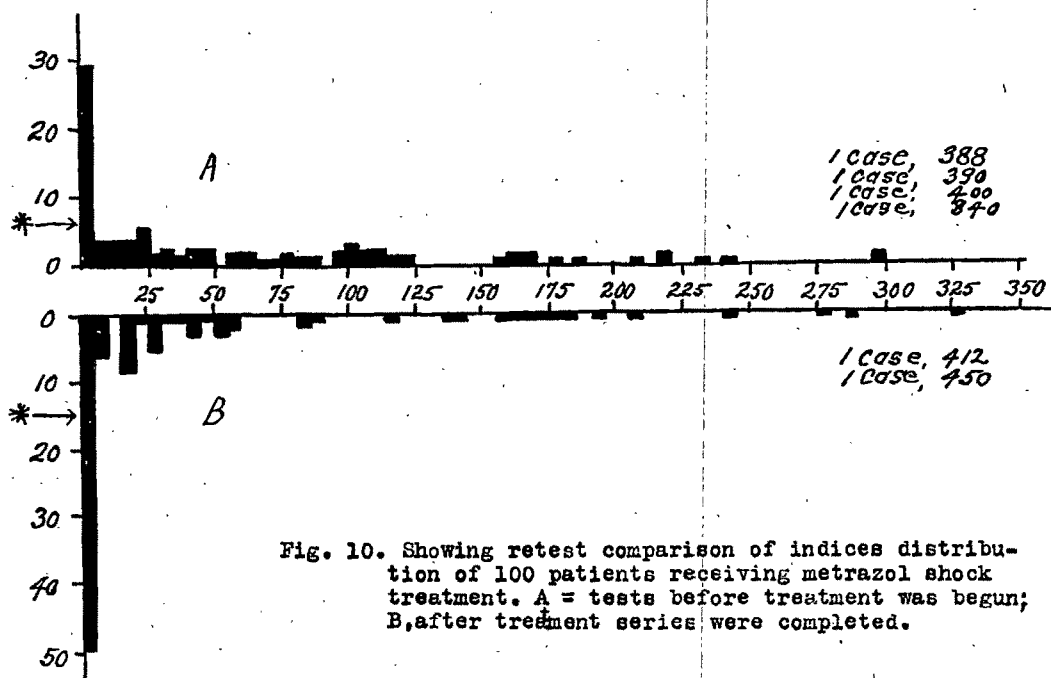


Fig. 10. Showing retest comparison of indices distribution of 100 patients receiving metrazol shock treatment. A = tests before treatment was begun; B, after treatment series were completed.

nize some specific thought trend with the course of movement. Such synchrony seems facilitated whenever there is the added ability of voluntary directional control of the movement. The capacity to control movement direction may be a fortifying feature in one who is given to extensive autokinesis. Normal subjects with high autokinetic indices

the light, emanating rays, rotations, halo effects, recessions and approaches of the light, etc., but seldom speak of having a pleasant feeling. In fact, their remarks after the test often convey the impression that they considered the test an uneventful, prosaic affair. A few manics have expressed elation over the constant changes they claimed to have

seen taking place in the light itself. If there is any differential feature in the test situation to distinguish manics from depressed patients it is that the manics are more inclined to notice such focal changes.

The question of why patients with medium autokinetic characteristics have shown better recovery rates is of special interest. In experiments with normal subjects those with medium indices often had greater ability to inhibit movement by voluntary effort, and within limits also to facilitate its extent, though not necessarily its direction. Some sampling among patients has shown similar traits. Furthermore, when normal subjects were tested in groups and then their reactions compared with those obtained through individual tests the greatest changes in index readings, apparently brought about by group influence, occurred in the area of medium indices. All this seems to point to a certain adaptability or flexibility of persons with such indices and may help to account for the better recovery records of patients with such movement traits. An attempt to specify how such patients differ symptomatically from patients with other movement patterns at times may be difficult on first sight. Closer observation reveals some fairly well defined tendencies. There is frequently a more pronounced symptom mixture which makes for a greater initial uncertainty in diagnosis. Excitement may often be very intense, with hallucinations and delusions prominent, but through all this, lucid moments sometimes come impressively to the fore, though possibly only for a few minutes at a time. There is usually more spontaneity in remission, shock therapy produces a more rapid recovery, and process schizophrenia and genuine blocking are found much less frequently than in patients with higher movement indices.

In comparing normal subjects with patients in Table IV a larger percentage of patients register no movement than do normals. It is not known whether this means that with the onset of illness a certain number of individuals reduce movement to zero, or whether more patients come from that group in the general population which is naturally prone to see no movement. From the fact that, with the exception where shock is an influence, patients do not radically

change their autokinetic tendencies, the latter seems the more plausible. Thus far there are only 2 cases in which the test was performed before and after illness occurred. In both cases several years intervened between the first test and the illness, and in both instances the test during illness agreed with the first test as well as with the general diagnostic findings in this study.

How graph patterns are related to various types of psychoses remains at present a matter of appraisal of averages and trends rather than one of statistical certainty. When only movement above index 10 is considered manic-depressives show, on the average, a larger number of stops in the course of movement, and also lower indices than schizophrenics. Of all schizophrenics, hebephrenics show the greatest number of stops, the lowest indices and more erratic movement patterns. Catatonic and paratoid schizophrenics are nearest alike in their movement. However, paranoid schizophrenics represent the only diagnostic group in Table I in which an equal distribution between movement and non-movement is found. This raises the question whether this may be explained partly by the greater universality of paranoid symptoms and a consequent greater chance scatter in diagnosis.

Coupled with the finding that under ordinary circumstances autokinetic reactions have proven fairly constant in individuals, their use in personality testing may be enhanced by the discovery that under certain conditions modifications in autokinetic perception do take place. The effect of shock has already been mentioned. Sherif(12) and Sherif and Cantril(13) have shown that socially conditioned attitudes have an important bearing on bringing about changes, even in such relatively unstructured perceptual fields as afforded by the autokinetic test—more so for some individuals than for others. Haggard and Rose(10) found similar modifications taking place and attributed them to the active participation of the subject in the conditioning process. This all agrees with our findings in group tests and test trials under facilitating and inhibitory attitudes(16). The possibility for modifications in patterns and extent of autokinetic movement offers a wide range for test refinements,

and indicates the direction for more accurate diagnostic and prognostic evaluations, and possibly also for eventual therapeutic application.

There are several fields of investigation in which the autokinetic phenomenon might be used profitably to extend research in psychopathology, and to clarify the nature of autokinesis itself.

Since hallucinosis and autokinesis are more prominent in schizophrenia than in other severe functional psychoses, and both show projective characteristics, a relationship between the two suggests itself. The discovery by Kleint that autokinetic reactions are found in other sensory fields adds weight to this suggestion.

If, as it appears, autokinetic perception operates through central mechanisms, and shows some variations when the subject changes from a state of passivity or quiescence to intentional mental activity, then it would seem possible to establish some relationship between it and electro-encephalographic readings.

Speech involvements (stuttering) and blocking were found nearly always associated with considerable movement. The side to side movement so often found in stutterers, and in persons whose hemisphere dominance had been interfered with through handedness reversals in childhood, points to the theory of central origins of autokinesis. The suggestions by some investigators that stuttering, and the closely related phenomenon of blocking, may be due to a general neuro-muscular conditioning favoring such dysfunctions merits attention in the light of the opinion expressed by Adams, Kleint, Guilford and Dallenbach, and others, that autokinesis is always accompanied by body tensions concomitant with the direction of movement.

Disturbances of body image have been observed to be more bizarre and pronounced in schizophrenia than, *e. g.*, in the manic-depressive psychoses. It, therefore, seems logical that such labile perception as some persons show in autokinetic movement would provide a likely basis for investigating body image distortions. Pertinent to this is the idea of Benedek and Angyal(3) that a connection exists between the personality type

and body schema disturbances, and that psychotic symptoms, especially in schizophrenia and in intoxications, can often be traced back to an analysis of body image disturbances.

Nearly every person from whom a history of migraine was obtained showed extensive movement. This gains added importance for further study in the light of the reactions of epileptics in the autokinetic test.

Complaints about the inability to fall asleep easily, and to sleep soundly, come more numerous from persons who experience little or no autokinesis. Among patients, manic-depressives are noted for their insomnia. There is evidence from questioning and observing subjects, both normal and psychotic, that those who experience more extensive autokinesis are inclined to be less pervious to all kinds of external stimuli, and can, under some conditions, intentionally exclude peripheral sensory distractions from consciousness. It seems this might have a direct bearing on the problems of sleep mechanisms. The question of hypnotizability enters in this connection. A number of normal subjects who saw extensive movement have remarked that they were aware of an hypnotic-like feeling during the test. This, coupled with the amenability of such persons to self-imposed suggestion of movement direction would make them seem, on first thought, good subjects for hypnosis. However, this does not agree with the classical findings in hypnosis and hysteria inasmuch as hysterical subjects are prone to see no autokinetic movement. It is, therefore, conceivable that such fixity of perception as sometimes seen in the autokinetic test would lend itself more easily to giving an outside command attention, whereas, the autism projected into seen movement might not be so compatible with the will of external authority.

Finally, the question has been raised frequently regarding the genesis of autokinesis in the development of personality. There is some evidence that it has some fairly early beginnings in life. A few children have been tested as early as age 5 to 9, with indications of seeing movement. A few were tested at age 10 to 12 and then followed for as much as ten years through occasional tests. They showed the same constancy found in adults. The tenacity of the trait was demonstrated

in shock patients in that it gradually assumed its original form after shock was discontinued. A few families have been tested. The father and mother were usually opposites in autokinesis, and the siblings showed variations ranging from zero to high indices. Three pairs of twins, however, showed the members of a pair to be alike—one pair registered zero, two pairs gave more extensive movement but similar patterns. Of approximately 60 normal married couples three-fourths of them were opposites. Only two couples showed both man and wife to have zero indices. In 60 couples, where either the husband or the wife was a mental patient, there were 12 instances where both the man and his wife had zero indices, and 4 more where movement was very restricted on both sides. The whole distribution complex of indices of the couples in which patients were represented was noticeably different from that of normal couples. These incomplete findings require further study, but they lead to speculation about the biological concomitants of autokinesis and its psychological dynamics.

SUMMARY

The autokinetic phenomenon is the visual experience of apparent movement of a stationary object, and can be observed most effectively by looking at a fixed pin-point light in a totally dark room.

The phenomenon is offered here as a projective measure of personality structure, and in this sense is used as a diagnostic indicator in mental illness. The test has a proven high reliability. An index figure into which various aspects of the movement pattern is calculated is used for each subject. The movement is more pronounced in schizophrenia, epilepsy, psychasthenia, neurasthenia and anxiety states. In the manic-depressive and involutional psychoses, and in conversion hysteria, movement is, as a rule, either absent or much less extensive.

Atypical test results are discussed in the light of more detailed diagnostic opinions of the staff of the hospital in which the tests were given. Prognostic indications are found in the extent and patterns of move-

ment. Limited or medium amount of movement may be considered prognostically more favorable than extensive or no movement. Fairly accurate limits, expressed in indices, have been established in this connection. Erratic movement patterns presage, on the average, a less favorable course of illness. Sex differences are shown in that more men than women observe autokinetic movement.

Under comments some implications and analogies are presented to show relationships between autokinesis and mental disturbances, and some suggestions are offered for further investigation.

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BRIEF PSYCHOTHERAPEUTIC INTERVIEWS IN THE TREATMENT OF EPILEPSY¹

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It is important that all psychotherapy be adjusted to the needs which are indicated by the psychopathological findings of the patient. This concept takes into consideration the psychodynamic factors as well as all other psychopathological symptoms. The brevity or infrequency of interviews can and must be a part of intensive psychotherapy; *i.e.*, a psychotherapy which is intensive considering the particular problem to be attacked and corrected.

The indications for the type of therapy to be used in an epileptic patient should depend on the psychopathological findings, the dynamic factors involved, and the general personality setting. Those psychopathological findings which will influence psychotherapy greatly are thinking difficulties, emotional interferences, and the degree of deterioration. Psychotherapy uses language as a main tool. In order to utilize this tool most efficiently, the physician must recognize any difficulties which will interfere with the patient's ability to express himself through words and to understand fully the therapeutic procedure and the physician's language. Various degrees of disturbance of the intellectual functions are to be considered in most epileptic patients. For example, there is frequently a vagueness in the use of concepts and a tendency to digress from the topic under discussion. These tendencies necessitate active guidance by the physician as well as the use of concise expressions. The attention may be limited. In those patients who are usually treated in ambulatory practice, and whose psychopathological handicaps are frequently not recognized, a dynamic analysis of far-reaching degree is not possible. The physician must actively pull together the material which comes out in analysis; passive analysis must be considered

contraindicated. Another important finding is the pathological persistence of emotions, often of unusual intensity. This fact prevents a satisfactory catharsis of more than transient value. There is a readiness to react with the same emotional pattern to relatively minor situations. It may be that even after far-reaching and repeated discharge of emotions a remnant exists and that this feature may be of essential psychopathological significance in some of the epileptic disorders. These emotional reactions may express hostile rejection or sentimental dependence and may be related to repressed material as well as being a direct response to actual situations. The latter reaction frequently seems to be a repetition of earlier childhood patterns. Besides an inability to forget unpleasant experiences and an urge to dwell on them, epileptic patients show frequently a tendency to shut out other experiences as well as to repress them readily. Treatment may utilize these tendencies constructively. In early deteriorative changes, and more so in advanced stages, perseveration of thinking and emotions, when recognized, can be used constructively in brief interviews whereas they lead readily to a waste of time and the destructive strengthening of undesirable emotions in sessions of an hour's duration. One disturbing early symptom is difficulty in differentiating between the essential and the non-essential which leads to an apparent evasiveness, to circumstantiality and repetition.

In evaluating the dynamic factors, somatic (especially neurophysiologic); psychodynamic, and socio-economic factors must be considered. In the long-term treatment of an epileptic disorder one must be aware of the constant changes which take place in the patient. They may be marked or mild, sudden or insidious, and with these changes the relative or the absolute significance of various of these factors assumes a different meaning. Treatment must take cognizance of the constellation present, but must also be based on a long-term plan which is plastic

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but consistent, fitting the individual epileptic patient. In this setting, symptomatic treatment is essential as it helps to ameliorate personal and social difficulties and offers better possibilities for a constructive attack on the larger problem of permanent adjustment. In the use of anticonvulsive medication one should guard against the suppression of neurogenic symptoms without noting their psychological effect on intellectual and emotional functions. The desired result of treatment should not be the absolute control of a group of symptoms but the optimal control in relation to all the symptoms present. Whether the older clinician's statement is correct that the release of pent-up personality reactions through occasional convulsions is desirable and whether one might actually evoke them judiciously is a therapeutic problem which should receive critical consideration. A psychodynamic analysis, based on the modern genetic-dynamic approach, is important in every patient. On the other hand, the still little understood epileptic psychopathology is inviting to speculation which may result in an unrecognized symptomatic treatment. Erotic sentimentality, sexual symbolism, and not infrequently overt sexual psychopathology force the therapeutic attention to the possibility of a far-reaching analysis, or at least to the use of modern psychopathological knowledge in interpreting difficulties to the patient in a way befitting his needs. Very often, especially in patients with other psychopathological involvements which are not very obvious, an analysis of the sexual factors may become exclusive and therefore symptomatic. Such treatment becomes especially destructive in deteriorating epileptics because of their perseverating emotional features and their inability for spontaneous synthesis. One should also consider that anxiety and resentment, stirred up in dynamic analysis, may affect epileptic psychopathology adversely. These emotional reactions, which are valuable tools in the analysis of other conditions, should be used here sparsely and in a restricted way. The beneficial results which were obtained by Hendrick can be supported by the author's personal therapeutic experience. A critical reading of the publications of therapeutic enthusiasts of 20 years ago will reveal the

unfortunate results of injudicious sexual analysis. Among the patients treated by the author were several who had received symptomatic sexual analysis by other psychiatrists. In every epileptic, an understanding of the family relationships and the development of the individual from infancy are important. Frequently, however, in the immature epileptic the physician may become fascinated by the possibility of finding the main therapeutic solution in the analysis of the psychodynamic syndrome of the parental and sibling relationships and apply knowledge gained from the broad field of psychopathology uncritically to the special aspects of the epileptic disorder. The dynamic aspects of the patient-physician relationship have in the past received unsatisfactory attention in the treatment of epileptic patients. It is, for example, unclear whether special psychopathological factors preclude a therapeutic use of a transference neurosis. Transient or permanent transference relationships of various degrees have been used successfully, but the physician has to depend on his personal experience with epileptic patients as literature offers little. The successful manipulation of socio-economic factors may be hindered by difficulties in planning an education suitable to the psychopathological findings, by poor adjustment to living in crowded cities and towns, and by lack of acceptable work in the mechanized and complex competitive labor conditions of today. Whenever the epileptic process has advanced to the degree of marked, although not wholly incapacitating, deterioration or where it occurs in the setting of oligophrenic conditions, treatment in and out of hospitals may become a most difficult task.

The personality setting in which an epileptic disorder occurs is important therapeutically. Some personality features may be constitutional but in treating the patient one must remember that one deals with an individual whose growth in life has been influenced by many, and some of them poorly understood, factors. Modification and limitation of treatment are necessitated by the psychopathology of the immature, the dependent, and the psychopathic personality. To this latter group belong the loosely organized and ill-controlled as well as the set, unbending personalities.

The technical procedure of brief psychotherapeutic interviews must be based on general dynamic principles which, whenever possible, should be supported by the dynamic study of the individual patient. The knowledge of dynamic psychopathology permits the physician to recognize unclear factors and deal with them instead of having the patient make an attempt at analysis of all repressed factors. The result is an active guiding of the patient by means of constant evaluation of the changing psychopathology as well as the underlying psychodynamic factors. For general guidance concerning the pace of the treatment, one should be directed by the patient's success in dynamic adjustment, by his symptomatic improvement, and by warning signals which demand a decrease of psychotherapeutic pressure or a new orientation in the therapeutic plan. Such warning signals are the increased frequency or severity of convulsions and petit mal attacks and especially increased anxiety leading to thinking disorders and epileptic equivalents, including depressive reactions. In the patient's acting out, it may be difficult to recognize what is due to epilepsy and what to underlying general personality disorder, e.g., an unwillingness to assume responsibility. The therapeutic difficulty becomes especially marked when a patient is capable of using convulsions or other epileptic symptoms for acting out. Resentment may assume the form of paranoid reactions. Further warning can be recognized in the non-constructive use of knowledge gained from analysis and in the coloring of the convulsive attacks through sexual stirrings.

At the beginning of treatment, discussions of one hour's duration are indicated, even in patients with marked psychopathology, until one has obtained a good understanding of the psychopathology, of the life development, of interpersonal relationships, of present life adjustment, and of obvious difficulties. During this phase a positive patient-physician relationship will become established. The subsequent interviews, once a week to once a month, may last from 15 minutes to an hour. It is possible to shorten the interviews because one has become intimately acquainted with the life pattern, the personalities in it, and the repetitious emotional involvements. The progressive

treatment usually leads to a marked dependence on the physician, who should utilize this relationship to make the patient carry an increasing amount of responsibility.

The goal of treatment should be a new orientation to the problems related to the illness and to interpersonal relations. Increasing self-reliance should go together with better socialization. The modification of rigid standards will permit a better dealing with the problems of reality. A more detached and tolerant attitude to body appearance and somatic functions should be striven for. Planned re-education must be pursued to modify and, if possible, change the patient's undue attention to detail, his indecision, egocentricity and indulgence in phantasy life.

There are several therapeutic problems which occur in a large number of epileptic patients and therefore deserve a more detailed discussion. Resentment is a destructive emotion which interferes a great deal with a healthy life adjustment. The release of these pent-up emotions is helpful in the beginning of treatment. Soon it will become obvious that mere rediscussion will keep the resentment alive. One has to try to make the patient recognize the factors involved and to develop tolerance. It is usually unwise to dwell too lengthily or too frequently on such discussions and one should guard against letting the analysis of these emotional reactions become symptomatic therapy. Aggressive resentment is readily recognized while resentment in shy and withdrawn patients, suppressed and often not noticed by them, may escape therapeutic attention. Treatment must take into consideration the reactions of resentment to special situations as well as the underlying capacity to experience readily intense resentment. A tendency to projection is part of intense resentment. These projections, which may assume the form of paranoid symptoms, are usually transient and do not disorganize the patient's personal life nor do they lead to systematization. They should be distinguished from the essentially paranoid epileptic reactions. Dynamic analysis of resentment becomes impossible when this emotion is accompanied by marked anxiety which leads to disorders of attention and concentration. The physician must be aware of his reaction to the

resentment and guard against thwarting its release or dissolution by argument or by domineering aggression. He should suggest possible errors in the patient's judgment or point out other possible interpretations or situations in the form of questions. This aspect of treatment corresponds to that of paranoid reactions. One should also remember that persons usually react with an increase of the emotion if they are told that they are hostile or resentful. A less disturbing reaction occurs if one remarks to the patient that he appears irritable or annoyed. It is possible that, as some authors claim, the epileptic patient has a pathological degree of self-satisfying and self-magnifying needs and therefore reacts with resentment to being thwarted in their fulfillment.

In analyzing the patient's emotional reactions one has to determine how much intense emotional participation the patient can endure. Emotional discharge and the accompanying insight must take place gradually. Sometimes the physician may have the impression that the patient is experiencing full emotional abreaction while he is working through the dynamic factors, whereas in reality the patient is only obtaining the repetitive satisfaction in expressing resentment. Discussions at well-spaced intervals with psychotherapeutic readjustment over a long period of time may be necessary to prepare the patient emotionally for the insight which he otherwise could not tolerate. The physician will gain the psychodynamic understanding of resentment before the patient is able to accept it. In some patients, siblings or parents may have similar personality traits. In such cases a temporary separation while undergoing psychotherapy may lead to an improvement which will permit him to deal with these personalities more constructively than previously. In other patients, psychotherapy reveals frustrated aggression as a fundamental factor in producing resentment. It may be possible to solve the problem without the patient's analysis of the dynamic factors.

The pathological emotional reactions of anxiety and depression frequently need therapeutic attention. It is usually satisfactory to analyze these reactions with regard to immediate life situations, with attention to

previous similar reactions and their relation to fundamental dynamic aspects. It seems hazardous, however, to make the analysis of these emotional reactions the center of an intensive therapeutic analysis on the theory that the dread of losing consciousness is linked up with the fundamental dynamic factors of the epileptic disorder. One should avoid producing fears and dangerous insecurity by the unwise analysis of anxiety and defense reaction.

Stubborn self-assertion, expressed in aggressive attacks or in weak but persistent resistance, usually has to be modified on the basis of the physician's, but rarely the patient's, understanding of the dynamic factors. A formulation of relatively obvious factors can be made the working basis for a modification of the patient's attitude to certain personalities and situations. Infrequent brief interviews are helpful in this planned re-education whereas daily interviews, with the unavoidable stirring up of anxiety or resentment, may increase the patient's regressive and procrastinating tendencies.

Insufficient emancipation from one of their parents with frequent or persistent unconscious attempts at unsuccessful independence are present in many patients. Through a positive patient-physician relationship the physician will be in a position to offer emotional security and sympathetic affection which will permit the patient's healthy self-assertion based on increased self-reliance. It is not necessary, and frequently inadvisable, to make the patient aware of the true nature of his relationship to his parents. Support and guidance through the emotionally strong transference relationship must be offered for years in some of these patients. It is obvious that a physician must understand his own reactions to the patient and have a progressive plan of treatment if he wants to remain active psychotherapeutically and make each interview a therapeutic worthwhile task. The patient's frequent sentimental attachment is a thin veneer for the underlying sexual involvement of which he should usually not be made aware. The analysis of sexual factors is important but should be carried only as far as the patient can handle. The

principal therapeutic task may be a healthy sexual hygiene which the patient is able to follow by accepting his physician's advice.

The epileptic patient has a characteristic attitude to his body—a need for physical perfection and anxiety to somatic malfunctioning. There is a constant need to rely on his physician's reassurances and a meticulous attention to physical hygiene. Whether this body attitude is the expression of deep-seated narcissism or related to a marked anal-erotic orientation are speculations which cannot be proved with our present knowledge. The marked insecurity is therapeutically important. Recognizing the painful emotion of anxiety, a physician will always be ready to seek means of alleviating it. Only if he thinks of this reaction as hypochondriasis with its connotation of unjustified overconcern will he become bored with these patients. With each return of the expression of body insecurity he is forced to look for factors which have brought about an increase of anxiety. In patients who are capable of understanding the influence of emotions on physiologic functions, brief interviews will reveal the dynamic factors of the immediate situation. This treatment implies the need to check carefully on each new symptom before its psychogenic nature is accepted. If this is done promptly and judiciously even re-examination will not disturb the security which has been built up previously. In addition, the patient must learn to correct his habit of being aware of minor body sensations and become tolerant of somatic inadequacies.

Difficulties in relationship to other persons, aggravated by the patient's self-centered sensitiveness and his ability to form intense and lasting antipathies and attachments, need separate analysis and constant therapeutic attention. In this respect, as well as in all brief psychotherapy, the danger is ever present that one tries to obtain too many facts to prove the suspected dynamic factors and that one offers too much dynamic interpretation or at too early a phase of treatment. One of the goals of treatment should always be to broaden the patient's interests and to permit him to share with others. Frequently

one may have to be satisfied with a group adjustment which is based on helping others in order to satisfy self-centered glorification.

SUMMARY

Brief psychotherapeutic interviews try to utilize the dynamic knowledge of the individual patient's past life and to apply it to a satisfactory adjustment to the present. His hopes and plans for the future are constantly taken into consideration. Difficulties which precipitate maladjustments are reviewed from the same point of view. The treatment considers impaired functions, such as disorders of attention, concentration and thinking, in the technique of the interview. Recurrent resentment and anxiety may be relieved through a necessarily very limited analysis and their intensity reduced. The persistence of these destructive emotions as well as the presence of other psychopathological symptoms may limit or prevent an analysis which would give the patient an understanding of the dynamic factors. In order to proceed one must correct the factors which lead to therapeutic obstructions or attempt the dynamic analysis when the patient becomes ready for it. This type of psychotherapy must use a plan of treatment which covers a long period of time and which is reconsidered and modified whenever psychopathological changes or psychodynamic, somatic or environmental factors make it necessary. The results of the patient's adjustment of, and to, his life problems are encouraging enough to justify his physician's active therapy and guidance during the long period of the epileptic disorder.

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STATE HOSPITAL SCHOOL FOR EPILEPTIC CHILDREN¹

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In 1929, a survey was conducted in Michigan, through the State Superintendent of Public Instruction, to determine the approximate number of educable epileptic children who were being deprived of an opportunity to attend school because of their convulsive manifestations. This revealed an actual total of 386, and there was no doubt that there were others who were not reached by the study. It included Wayne County with the city of Detroit to a very slight degree.

In 1934, a survey was made in Detroit, which revealed that 514 epileptics were known to the Board of Education, of which many had been excluded from, or were having difficulty staying in, school because of their seizures. Thereupon, in June of that year, the Detroit School Board established the first public school for epileptics in the United States, now known as the White Special School. Children were collected from all parts of the city by bus and medical care was included in the program.

In 1944, we made a survey of the states to determine how many provide schools for epileptic children. There are in this country only 11 state institutions solely for epileptics and, of these, 8 have some sort of school facilities; 6 have regular school buildings constructed for that special purpose, one utilizes its chapel, and another has school rooms in its residence buildings. There are many children with convulsive disorders in institutions for the mentally deficient who have educational opportunities, but the needs of those of normal intelligence are not adequately met in this manner.

The school unit at the Caro State Hospital was opened in the summer of 1940 with a capacity of 150. The school building and three residences, each housing 50 children, comprise the present unit, but the master plan calls for eight such cottages. Foresight was exercised in the construction of the school building, in that it can be added to in

proportion to the increase in bed capacity without impairing the architectural or functional value of the building. It is a one-story, sixteen room structure, planned and equipped for the special needs and safety of the epileptic child. Each classroom has its own lavatory and seizure recovery room where children may be cared for by a nurse, summoned by a buzzer, during and immediately following a seizure. This room has large windows between it and the classroom so that if a child merely needs to sleep after recovery from the attack proper, he can be under observation of the teacher. There are seven rooms for academic work, which are twenty feet square, and five larger rooms for kindergarten, music, and shops. The other four are: the principal's office, the attendant nurse's waiting room and office, the library, and combination auditorium and gymnasium complete with a stage and motion picture apparatus.

The normal personnel of the school is made up of the principal, five academic teachers, five special teachers, an attendant nurse and a caretaker. The academic requirements for our teachers are determined by the State Department of Public Instruction and are as follows: 120 semester hours of Teacher's College training, of which 30 hours shall have been in the field of special education. However, this qualifies the teacher for only a five-year provisional certificate, and he must have acquired 10 semester hours at the graduate level before the expiration of this period, in order to obtain a permanent certificate. The salary scale for the principal is \$250 to \$290 per month for twelve months, and for the teachers \$200 to \$240 for ten months, with the exception of the physical education instructors. These two, a man and a woman, are employed on a yearly basis, as a recreational program is continued through the summer months.

During the first five years of the school's existence, 301 children have been enrolled; 37½ percent of these are still attending. Those who are still in residence, but not in

¹ Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

school, comprise 32½ percent, and their exclusion was due to such factors as maximum age, inability to profit by further training, extreme conduct disorders, and physical handicaps. Of the total group, 20 percent are on parole, 5 percent have been discharged and 5 percent have died. The ratio of boys to girls, due to housing facilities, is 60 percent to 40 percent respectively, and there is no noteworthy difference in the mental status of the two sexes. The largest age group, both on admission and in attendance, is 11 to 15 years.

Academic work through the eighth grade is offered and those capable of carrying more advanced subjects are given individual help. The curriculum also includes music, physical education, sewing, shop, and manual and fine arts.

The basic aims of the school are not defined in terms of academic progress. While we undertake to guide and encourage the children in the development of essential skills consistent with their ability, we also try to plan their curricula in such a way as to assure their happiness and personal satisfaction in their school work. The greatest emphasis is placed on social adjustment, for we believe that if this is accomplished, school achievement follows naturally. In a large percentage of cases it is the convulsions plus unacceptable conduct and personal relationships that have brought these children to us. Therefore, the development of social patterns of behavior, the recognition and acceptance of their own situations and limitations and the broadening of their experience through formal teaching, all of which fit the child for more useful, happy living, are the real aims of our educational program. Our ideal is the return of the child to his home and public school, but we are limited in its achievement by such factors as inadequate parents, unsatisfactory living conditions, and other mental and physical handicaps not amenable to treatment.

The school department cannot function efficiently as a discrete unit, but must have a working relationship with the services and facilities of the entire institution. Herein lies our advantage over the public school which must combat destructive influences that are at play on the child during the nonschool hours.

At the time of commitment the court papers on children of school age are referred to the social service department for review and further investigation to determine their eligibility for school enrollment. A personal contact with the family is thus established early, which is further strengthened by the admission interview and maintained through correspondence, office interviews and a social worker's visit to the home. Vacation plans are effected through this department, and all children whose homes are satisfactory and parents adequate to their supervision are permitted to leave during the school holidays. Not infrequently, the parents are very much in need of help in relation to attitudes, discipline and personal emotional problems. Parole plans and supervision during the parole period are also social service responsibilities.

The psychological department has an active relationship to the school, as all children are studied thoroughly on admission from the standpoint of intelligence, performance ability, and educational ability. Referrals to the school are made through this department, which reports detailed results of the studies to the principal. Routine retests are also made, and special cases may be referred by the teachers for study and advice.

The physical and neurological examinations are regular parts of the admission procedure, together with complete X-ray and laboratory studies. The teachers have access to the records which are, of course, valuable particularly in relation to visual and hearing disabilities and various types of paralysis. The physician immediately undertakes to control the attacks by the use of all known anti-convulsants, used singly and in various combinations. A doctor is always immediately accessible in case of emergency and the children are regularly observed by their cottage physician in relation to their general health.

The child's home during hours out of school is an attractive one-story building housing 50 children within a normal family range of ages. The parent person is a woman for the girls and little boys, and a man for the older boys. However, there are both male and female attendants in the boys' buildings. The children participate in the housekeeping and care of their grounds and each has

some little duty or responsibility. The supervisor handles all minor disciplinary problems but must have the approval of the cottage physician for anything indicating extended withdrawal of privileges. No corporal punishment is permitted and the only accepted method is restriction of activities and pleasures. The child is held up to the same standard of behavior at school and at the cottage, with close cooperation among all in authority. This consistency of discipline and unity of control are in themselves stabilizing factors. While kindness is practically a

motto with us, there is very little of the emotionalism involved which governs parents in their demands on an afflicted child. The proper relationship between the institution parent and the true one is at times difficult to achieve, as many of the children transfer their affections a little too readily for the mother's comfort. Nevertheless, the intelligent and unselfish parent is generally gratified to know that his child is happy and at last finding the security and comradeship that the home and community failed to give him.

THE USE OF RESIDENCE IN PSYCHIATRIC TREATMENT WITH CHILDREN¹

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Resident psychiatric treatment as developed at the Children's Service Center of Wyoming Valley has been a practical application in residence of practice and principles evolved in the child guidance clinic. Basic to clinic practice is the recognition that both child and parent have had a part in the creation of the difficulty for which help is sought, and that both will have a part in the solution. The child is seen as an immature individual who cannot be approached as an isolated entity but must be considered in relation to a complementary parental force.

Before psychiatric treatment is undertaken it is necessary that domestic responsibility for the child be clearly defined. If custody for a child is not actively assumed his primary need is a foster one and, indeed, such an unmet personal need may contribute to emotional disturbance and the development of symptoms. We believe that if a domestically isolated child can form a tie it should be with a parental force which can continue to have meaning for him. Hence such a sustaining association should be with parent or foster agency and should not be with the therapeutic agent which must bear to him a temporary relation.

For many children it is probably not possible to become really engaged in psychiatric treatment until they have been able to establish a strengthened association with parent or foster agency. There is in any event a high correlation between the ultimate prognosis and the degree to which connection with the parental force has been enriched.

Admission to residence for treatment must then be utilized to emphasize the inter-relatedness of child and parent rather than be allowed to create complete separation. Circumstances which hold child and parental force together are that the parent or foster worker has chosen this type of help for his child, that he maintains a relationship with

him while he is in residence and that he will be responsible for the continuing plan when the child leaves residence. This relationship to the child in residence is maintained through visits with the child and also with the social case worker at the center. The child derives his security in residence less from the understanding and acceptance of him by those with whom he lives than from his active and sustaining relation to parent or foster agency.

At the onset, it is important to go beyond the symptoms to some preliminary understanding of the psychological dynamics of the difficulty so that the child has a beginning awareness of his emotional need and of his part in the problem. If the reason for his admission to residence is the prevention or alteration of a circumscribed kind of behavior, the resident center takes over the same difficulty with which the parent or foster worker has been entangled with the child, and the child may simply transfer his struggle to the residence. As attention centers on his emotional turmoil rather than his overt behavior a basis is provided for the child's use of psychotherapy and takes the process out of the area of training or discipline as is implied in a school setting or correctional institution or "Home." His use of a treatment relationship is the sole purpose of the child's being in residence.

In arranging admission we are now not primarily concerned with the symptom picture but are more interested in ascertaining that there is a sound basis for beginning work. It is the parents' or foster agency's interest and concern which motivates the process and the child becomes an active participant only after a plan has been formulated to make this type of help available for him. A preliminary visit (occasionally several visits) is arranged prior to the child's actual entry into residence. This provides an opportunity to establish the rôles which parent and child will play and to ascertain that the child has some capacity to relate.

¹ Read at the round table on child psychiatry, at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

When the child does come into residence the coordinated work of the whole professional group is necessary in order to enable him to utilize effectively his treatment relationship. He is going to present difficulties in living according to the nature of his attitudes, abilities and way of relating to others. As in setting up the treatment plan in application, it is important now that attention does not become centered and fixed on a few practical issues rather than in treatment itself. There is some danger that the child may invest his interest and drive in a vicarious achievement as, for example, in school or in outside group activities. There is more hazard that issues may arise analogous to those which occasioned the parent's decision to seek help and that efforts to alter the behavior are so intensified that treatment becomes a secondary experience for the child. Troublesome behavior must be accepted as an expression of the child's difficulty and of what he is able to be at the time. The major concern is the manner in which he is becoming engaged in therapy.

This does not imply that resident professional staff permit full license in behavior. That would be artificial and would deny the real meaning of what the child is doing. Part of the significance of his behavior is already absent because he is not in altercation with family or foster home, but the very important quality which derives from his own feelings and tendencies is present. The resident staff member becomes related to the child around his actual behavior in the living setting. He represents authority in so far as the center takes over the responsibility for control in the life of the child. He can provide, to a degree, a limiting quality for the over-aggressive, disorganized child. He can encourage more active participation by the fearful or uncertain child. But primarily he is affording a living medium in which a child can find a place according to his own interests and tendencies. He has no desire to mold the child's actions but is interested in helping the child come to more awareness of the manner in which he directs his own actions. His response to the child differs from that of the therapist in that his concern is not to help the child express and examine his feeling, but to help him act in relation to living requirements.

In assaying behavior, resident staff must be oriented to where the child is in treatment. The aim in the initial critical period in residence is to help the child to a clearer definition of his behavioral tendencies. The parent's steps to seek help for him, which involve his placement in the treatment center, will arouse feelings and reactions which grow out of his particular difficulty. These provide an immediate basis for his relation to the therapist. As the child can center his troubled feelings in his treatment hours, there is less need for him to become entangled through his behavior in the living setting. Efforts to induce the child to benefit from experience itself, or to instruct or train the child in the initial period, tend to over-emphasize the importance of the living setting rather than therapy, and encourage the child to create issues which are difficult to meet.

The resident staff must be aware of behavior which derives from feelings aroused by the child's further involvement in therapy. For example, when treatment is difficult or painful, the child's efforts to avoid deeper involvement may occasionally take the form of frank truancy from treatment hours or runaway escapades. A more indirect type of evasion of treatment is seen when a child seeks to discuss an increasing amount of intimate personal material with resident staff rather than share his feelings with the therapist. Again, hostility which the child may not be ready to express with the therapist may lead to hostile acts within the group. The real meaning of such behavior, for the child, becomes altered if the response from resident staff is based on the external implication.

As the child makes further progress in treatment and is able to better reconcile his conflicting feelings and to develop a more confident sense of his capacities, he will sooner or later seek a new level of relationship within the resident group. Resident staff need to realize the full implication in incipient trends in behavior so that the child is supported in what he is ready to be rather than held to the patterns he initially turned to when he established himself in the living group. Sometimes it is difficult to recognize that there is a quality of self-realization in a child's actions, especially when the child himself relates what he is

doing to either antagonistic or very positive feelings about treatment, but if one follows the child's treatment hours carefully, the distinction can usually be made.

The child's progress, especially as it is reflected in behavior, will often uniquely arouse the feelings of parents. It is challenging to see a child realize accomplishment which he could not reach at home and the parent may respond in a variety of ways. He may, for example, feel more intensely the separation which he has arranged between himself and his child and want to re-establish the closeness out of which so much of their difficulty had grown. He may feel antagonistic to the treatment center and attempt to project on the center the responsibility for his child's being away from him. He may be unable or unwilling to recognize changes in the child. His feelings of rejection may come frankly to the fore. He may at once experience a new measure of common feeling with his child. Whatever the parent's response, it brings into relief the quality of parental nurture which has complemented the child's development. Work with the parent needs to be closely related to what he encounters in the child's newly emerging self and the manner in which he can more satisfactorily fulfill his parental rôle.

In order that treatment can take form around what child and therapist can establish together, it is necessary that the experience be freed from the practical responsibility which the center carries for the child. The psychiatrist will be to the child a person of some consequence. He must, however, avoid becoming the practical mediator of the child's daily affairs or the relationship takes on other qualities than psychotherapy. The child learns to turn to the resident staff with his plights and quandaries. By investing authority in the resident professional staff the actual consequences of the child's behavior devolve within the resident setting. His real activities come into treatment as the child is ready to consider them and his confidences are respected.

Psychotherapy is an exacting endeavor. It may, especially at the beginning, assess the child's capacity to the full. We accordingly do not introduce auxiliary measures until it is apparent that they too can be accommodated by the child. Children with

emotional difficulties that have existed for some time have many concrete deficiencies in achievement. Lack of school progress might be mentioned as an example. The successful utilization of remedial instruction would relieve the child of pressure from teachers and the frustrated feelings of failure, but it does not reach the basic trouble which itself is the cause of the retardation. It is illogical to try to immediately meet a child's practical needs fully when his lack of accomplishment is an indication that he cannot accomplish. We feel then that the child should be soundly established in treatment before ancillary measures are introduced. A more effective use of supplementary procedures is then possible.

As the ending experience unfolds one can see the value in the child having a sound and immediate relationship to those who carry parental responsibility for him. When he is ready to dispense with therapy, a continuing plan is possible for him only as it is supported by parent or foster agency. If residence has allowed a separation of child and parent to occur, or if changes have taken place in the child to which the parent is not attuned, a basis for the re-establishment of the home does not exist. There is even less to build upon if the attitudes of the parent, which led him to seek a physical separation from his child, are unaltered. The child under foster custody, without foster agency ties, would find himself isolated, or at least would face the prospect of taking on a completely new set of loyalties.

Actually, the decision to end stirs up a whole gamut of feelings in child and parent. The child may struggle against leaving the therapist, as he does in the out-patient clinic. He frequently has a deep measure of fear and uncertainty about the plan which is taking form for him. He doubts his newly acquired capacities. Old feelings are aroused and he may be inclined to deny his new self and reach back to his earlier difficult patterns. In a similar manner, the parent's apprehension may cause him to question their readiness to proceed and to mistrust the changes in his child. These feelings can be worked through in some part before the actual move from residence occurs, but a sound termination of the resident plan can only be founded on a matured and dependable relationship

between child and parent, which provides a basis for their continuation together.

Resident psychiatric treatment is an integrating experience. As in the out-patient child guidance clinic, treatment unfolds around a structure which involves the child and a parental force. The resident factor

is introduced where the child-parental constellation is not sufficiently established or free that therapy can be arranged on an out-patient basis. Psychotherapy with the child is, however, the same process and through it the child moves to a healthier relation with parent or foster agency.

INSTITUTIONAL TREATMENT OF JUVENILE DELINQUENTS¹

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Because the society in which we live has not, as yet, devised any other widespread method of dealing with juvenile delinquents, they are usually placed in institutions, ostensibly for corrective treatment. Because this is the prevailing method, a great responsibility rests upon the institutions. "Corrective treatment" may, by an institution, be interpreted as punishment, or it may be interpreted as rehabilitation. The distinction is an important one. But it is of graver concern to the psychiatrist that the latter approach, unless thoroughly developed and executed, can fail miserably as the first to reach the individual brought under the institution's care.

Many of our institutions have evolved programs and activities for their population, including academic or vocational guidance, and thus have attempted to graduate rehabilitated individuals capable of meeting and solving the problems they will face when they return to society. On some occasions this method may meet with some success, but on the whole institutionalization is significantly unsuccessful even under the best of educational set-ups. Various studies of recidivism, such as those of the Gluecks(1), serve to verify this impression. There are many probable causes for this failure in efforts at rehabilitation, some too obvious to merit much discussion at this time. They include punitive intent, lack of minimal facilities, poor organization, etc. It is probably universally accepted that the institutional regime does not reach and change the individual. Recidivism is the rule rather than the exception.

Since placing juvenile delinquents in institutions is the predominant means our present society employs in dealing with this problem, it seems imperative to examine some of the sources of their failure. One of the major points that should be made clear immediately is that delinquency or anti-social behavior

is the end result of internal conflicts which have come about through the individual's relationships within his environment. Delinquent behavior is the outward manifestation of inner difficulties of which the boy or girl is unaware. It follows that the juvenile delinquent is, from the point of view of psychiatry, a neurotic with unresolved conflicts, unconscious drives for which he is not responsible. It is impossible for him to understand them or even know that they exist.

This approach to the problem is borne out in an article(2) which surveyed literature on individual correlates of crime. These correlates included: definition of crime, chronological age, sex, race and nationality, physical traits, intelligence in relation to age and offense, specific personality tests, and multiple factors, etc.

A general conclusion from this series of studies (which is representative of many others) is that the juvenile delinquent is inferior in many aspects of personality. This is evident from the emphasis on worry, the high score on tests of neurotic tendency, the retardation on tests of social maturity.

If we establish the fact that juvenile offenders are neurotic in character, it naturally follows that their needs, if they are really to be rehabilitated, include comprehending psychiatric care and treatment. It is unfortunately true that little or no organized efforts are, as yet, made for this type of rectification in institutional placement.

Prior to and during incarceration all efforts are usually in the "accusative case"—and by that, I mean that they are usually directed toward the manipulation of conscious motivational factors. It is self-evident that anti-social behavior is motivated by unconscious factors. It is also self-evident that if punishment is based on principles which are the derivatives of the conscious minds of those who deal with the young offenders, it is fruitless to expect results from the punishment.

This type of treatment, touching only the surface of the neurotic mind, too often spot-

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lights the specific offense, leaving in the shadows the causes for the offense, the unconscious motivations. It is axiomatic in psychiatry to treat causes rather than the symptoms, and it bears repeating that delinquent behavior is symptomatic.

It is true that efforts are made, in many cases, to determine how the individual has been adversely influenced by his recent and immediate environment. And there have been changes in the approach to this type of investigation. Factors, such as Lombrosian concepts, anthropological defects, and genetically transmitted criminal tendencies have been outmoded and are no longer considered valid as etiology, but other equally invalid factors are often magnified in importance.

We must distinguish between what is hereditary and what is acquired. Physical characteristics and probably intelligence follow some genetic pattern. Attitudes at any given moment are resultant from previous life experiences. They are probably never inherited or even influenced by hereditary predispositions. This is another important distinction to those who deal with juvenile delinquents.

It is because attitudes are acquired that they can, at least theoretically, be changed and the individual benefited thereby. Anti-social behavior, like any neurotic expression, can best be modified by directing therapeutic efforts toward the unconscious factors that cause the behavior. It is not clear why the delinquent adopts delinquent symptoms rather than some other form of neurotic behavior. It is quite probable that some significant interpersonal relationship offered more satisfaction through anti-social behavior. It is also possible that such action is a result of emulation. Environment, therefore, is significant at the inception of the delinquent pattern, even though it becomes less significant during the perpetuation of the pattern. The parents of delinquents are usually hostile and unscrupulous and the child has to learn to adapt himself to the unpredictable environment offering a lack of adequate affection.

Delinquency, by definition, usually involves adolescence, a period of transition, when a person is no longer a child and not yet an adult. Many incisive changes take place in this period. The body, usually in

a surge, achieves its maximum growth and assumes its characteristic configuration. Sexual development reaches procreative capacity, and amorous stirrings seek a variety of outlets. There is a striving after emancipation from the previous sheltered existence, an urgency toward increasing self-dependence in thought and action. The sphere of interest expands from the confines of the immediate environment toward the community at large. Current standards and precepts are submitted to criticism, not as yet leavened or seasoned by experience, and the established order is boldly challenged and too often rejected. Adolescence is truly the period of revolt; the period when established order is readily identified with the constraints of the parental or authoritative relationships and therefore must be overthrown in order that the individual disclaim the dependency of childhood. Admissibly inherent weaknesses, exposure to educational blunders and burdensome life situations serve to intensify perplexities and twist attitudes and performances(3). It is the development of these attitudes that needs investigation.

When the physical needs of the child have been adequately met, the body develops properly. In a similar manner, when the emotional needs of the child have been adequately met, the attitudes develop properly. These emotional needs involve satisfactions and security, and they are therefore dependent upon the environment out of which the individual draws his emotional experiences. The most significant emotional experience is derived from the interpersonal relation with the first person who administers to the needs of the infant, usually the mother. This relationship sets the pattern. An insecure mother can provide the initial conditioning for insecurity in the child. Such an unhappy parent derives a measure of satisfaction in administering to her offspring, and this over-solicitude, actually a form of rejection, is often selfishly perpetuated beyond reasonable limits, eventually resulting in an immature, as well as insecure, and latently hostile individual.

Perception of attitude, or empathy, is the most powerful conditioning force in our culture. All through life we are restricted to more or less conventional patterns of behavior by group pressures. Defiance of these

conventions makes for insecurity. These group pressures are perception of attitude multiplied many times. We are, however, lamentably unaware of how quickly the child perceives the attitudes of those with whom he is in contact, and how those attitudes can shape and determine his own emotional make-up and behavior.

Maturity is not only a physical but a mental process, in an intellectual and an emotional sense. An individual achieves emotional maturity to the degree that he functions rationally in decisions of living and emotionally on the less frequent occasions when the situation demands an emotional response. An individual functions maturely to the degree that he functions rationally rather than emotionally. Characteristically, the insecure and immature individual functions in short term values, fails to profit by experience, shows abnormal emotional responses, and is usually too dependent. This is the type of person loosely termed psychopathic. Dependency is characterized by an abnormal need for the approbation of others and leads to frustration and eventual hostility.

Like other neurotics, the delinquent usually needs too much the approval of others, which may seem, on the surface, to be paradoxical considering his anti-social behavior. Fearing lack of approval materially adds to the conflicts troubling him, and to compensate for the resultant feelings of low self-esteem, he often engages in further anti-social acts. Because he lacks assurance, there is a compulsive need to prove himself. In this manner he develops a never-ending chain, a vicious cycle.

Effective rehabilitation demands that this be changed, that the person be released from the unconscious drives which motivate him without his awareness. It is obvious that any experience which evokes the inherent insecurity of the individual, or serves to perpetuate the pattern of immaturity, cannot conceivably change the pattern of his behavior. What is needed is an environment that supplies security and provides experiences for maturity. These must come in addition to the usual manipulation of conscious motivational procedures, organized and well-directed morale, and direct influence of personnel. It is possible to produce significant rehabilitation with a minimum of tech-

nical equipment. By directing all efforts to produce the proper morale, it is possible through group pressures, to produce significant changes in the behavior pattern. Actually, however, this type of treatment serves to teach the individual to repress undesirable traits of character, and is not ultimately a completely trustworthy solution. Nevertheless, it has been utilized by the Borstal Institutions of England and the Penal Colonies of Soviet Russia(4). A similar type of environment plus the proper individual, psychotherapeutic approach, should be even more successful if properly organized.

All difficulties in living, no matter what the degree or the specific diagnosis, involve conflict between the individual and his culture, or in his interpersonal relations. Behavior involving interpersonal relations involves pursuit of satisfactions and security. The pursuit of satisfactions is a response to primarily biological needs. These include food, drink, sleep and rest, and the satisfaction of sexual needs. The attainment of satisfaction causes a decrease in tension.

The need for and pursuit of insecurity grow out of man's cultural equipment, and are embodied in every person. Unlike the attainment of satisfaction, the attainment of security requires the maintenance of some degree of tension. The attainment of satisfaction according to culturally approved patterns does contribute to a feeling of security. When the needs cannot be met according to culturally approved patterns, it makes for increased tension that may be experienced as anxiety. In an effort to relieve this anxiety, the delinquent individual may exhibit further anti-social behavior. This obviously makes for the familiar vicious cycle.

It is characteristic of immature individuals that they have less ability to endure anxiety, and they frequently act out their conflicts. To reach the unconscious factors motivating this behavior, it is necessary to increase or expand the awareness of the individual. Initially, increased awareness of what is wrong in the present is required. With adequate awareness, the reasons why are eventually answered. Developing this awareness necessitates an indefinite number of personal interviews to educate the person to a new way of thinking(5). The irrationality of previous behavior patterns then becomes

more and more obvious to him, and he gradually gains the power to control emotional or irrational reactions in his living. This achievement is obviously worth more to the individual and to society than any other method of correction, and it is of specific importance in the age group of juvenile delinquents.

From the time the behavior of the delinquent becomes known to others, he is exposed to advice, suggestion, persuasion and judgment. There is no reason to believe that further efforts in this direction will accomplish the objective of changing him into a useful member of society. No matter what his specific offense, the circumstances contributing to his conditioning or apprehension, the individual is, by the very nature of his maladjustment, completely at a loss to understand the real causes for his behavior. Psychotherapy should therefore enable him to discover himself and thus lead to adequate self-assurance and self-reliance.

Delinquency implies ineffectiveness of the behavior by which the individual is pursuing the satisfactions he requires. He must eventually understand the significance of these drives toward satisfaction and security; must comprehend the significance of his past and the rôle it plays in his present behavior. Until he sees clearly an example of the way in which unresolved situations from the past color his perception of present situations, there can be no material improvement. Once this is attained, he then learns that more security is obtained by abandoning a complex security-seeking process than was ever achieved by it. He is then enabled to confront other anxiety-provoking situations in an effort to discover the factors in them which are experienced as a threat.

Psychotherapeutic interviews are directed toward the concept that difficulties in living arise from interpersonal relations. Mental health is achieved to the extent to which the individual can realize the nature of his interpersonal relations. Efforts are directed toward increasing his conscious awareness of what goes on inside himself. Specific suggestions are explained to assist him in this process, which is actually a process of increasing his ability to know consciously the way in which all the old, unconscious, dis-sociate patterns work to move him.

His attention is directed toward capturing, holding and formulating in words his marginal thoughts. This is one of the steps necessary to help him discover the reason-behind-the-reason for a specific behavior response. Many superficial examples are available in an interview to demonstrate the nature of marginal thoughts. For example, everyone has had the experience of feeling tense in some way or another. Our juvenile delinquent, during his interviews, is asked to search for all possible clues or reasons for his tension. He is next instructed to observe himself carefully in order to increase his conscious awareness of changes in body tension—such as changes in the quality of voice, clenching of his jaw or hands, tightening of his stomach muscles, etc. These may be the only evidence of anxiety, and when he is aware of them, he is then more able to appreciate the correlation between them and the specific situation evoking the change in tension. During interviews he is instructed to say, promptly and honestly, whatever is on his mind, without passing judgment, without censoring, and to be especially alert for any interrupting thoughts. When he is exposed to an emotional situation that arouses anxiety or tension, he usually adopts one of two forms of behavior. He may respond overtly by acting out this conflict. After unpleasant experiences in this direction, he may attempt to suppress or repress the anxiety by ignoring it, or by telling himself not to act like a fool. He is instructed to attempt, as objectively as possible, to discover why he reacted as he did. With persistence and encouragement, he will eventually discover an entirely unsuspected motive for this reaction. The unique satisfaction evoked by this discovery will inevitably stimulate him to further efforts in this direction. In this manner the initial insight is developed. This further enables him to understand his previous tendency to indulge in rationalizations—an all too universal habit. This is a form of self-deception through justification, a process of thought which enables one to evade the real reasons behind an action. In the vernacular it is termed "kidding one's self." The eventual goal behind eliminating rationalizations—through this process of close and persistent self-investigation—is the discovery that to gain satisfactions, and

particularly security, one must have freedom of self in all interpersonal relations.

It is obviously difficult to offer a full sense of security in an institutional environment. However, much can be done to eliminate unnecessary sources of insecurity. A well-balanced, flexible program, extending from education to recreation is conducive to a high morale. And high morale, in the form of group pressure, is the most significant force in maintaining discipline. As indicated above, this group pressure can serve to force the individual to repress certain anti-social trends. But it can also serve to bring them to the surface.

It is the work with the individual himself, in addition to the proper type of institutional set-up that is of such vital importance. No greater restitution to any individual can be made than the ability to know and comprehend himself fully. Incarceration of a juvenile delinquent is almost pointless, unless an opportunity is provided to unravel and understand the twisted threads of his own, individual experience with life. No amount of observation and analysis, pressure or judgment from the outside is going to restore him. He must, himself, develop a knowledge of those factors which drive him forward

in a constantly repeated and unsatisfactory pattern.

We, as members of society, must also understand and be more aware of this basic fact: anti-social behavior results when the individual has not had fundamental emotional needs adequately supplied during the impressionable periods of his life. A juvenile delinquent is searching for something he cannot find because he cannot find himself. His method of search—his acquired attitudes—can best be modified by increasing his awareness of his interpersonal relations, by giving him insight. This is the work of psychotherapy.

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STUDIES IN PRIMARY BEHAVIOR DISORDERS AND PSYCHOPATHIC PERSONALITY

II—THE INHERITANCE OF ELECTROCORTICAL ACTIVITY¹

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INTRODUCTION

In the course of an extended series of routine electroencephalographic examinations of psychiatric patients, there were included two groups of patients clinically diagnosed as psychopathic personality and primary behavior disorders in children. When organic neuropsychiatric conditions and epilepsy were excluded, these two groups were characterized by a higher incidence of abnormal electroencephalograms than any of the other, presumably, non-organic psychiatric conditions. An initial report(1) on 44 patients diagnosed psychopathic personality included 23 (52 percent) who had EEGs which did not meet the criteria of normal. This high incidence of electroencephalographic abnormality seemed to present an avenue of study which could possibly reveal relationships of value. In a subsequent study(2) of 68 patients, 54 percent had abnormal EEGs characterized principally by the presence of slow or very slow waves. Their distribution was radically different from the distributions for two other populations, a group of normal controls and a group of epileptic patients. Moreover, significantly greater proportions of abnormal EEGs were found when there was both a positive family history of psychosis, maladjusted personality, chronic alcoholism or epilepsy, and a personal history of cerebral trauma or severe illness than when neither of these factors was present.

Concurrent with the above studies had been one with the condition primary behavior disorders in children(3). In a series

of 67 children, none of whom presented signs of organic disease or in whom an organic etiologic factor was suspected, 49 percent had electrocortical potentials which were clearly abnormal. Again, as in the case of psychopathic personality, there were significantly greater proportions of abnormal EEGs for those patients having either a family history of psychosis, maladjusted personality, chronic alcoholism or epilepsy, or a personal history of cerebral trauma or severe illness, than when neither of these factors was present.

Because of the similarities of the populations and the findings in these studies, the question of combining the conditions psychopathic personality and primary behavior disorder into one population for further study was broached. Actually the terms psychopathic personality and primary behavior disorders refer to a wide variety of maladjusted adults or children who cannot by present psychiatric criteria be diagnosed in any of the better defined categories. Thus the maladjustment in these patients was not attributable to defects in intelligence, known structural or inflammatory disease of the brain, epilepsy, psychoneuroses or psychoses. Neither were those patients included in whom the above-mentioned disorders were suspected in an incipient form. The patient chronically addicted to alcohol, although suffering from a personality fault, was also omitted.

The outspoken social maladjustment of both groups of patients, which had been either continuous or repeatedly recurrent over a relatively long period of time, showed stereotyped deviations in the moral, social, sexual and/or emotional components of their personality. In general, the clinical symptomatology allowed the inclusion of the bland

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and asocial, the aggressive, the inadequate, and the schizoid personality.

Since the selection of patients into these two clinical categories of primary behavior disorders and psychopathic personality was dependent then upon exclusion of other conditions and also upon description, phenomenology or symptomatology which are common, it appeared justifiable to combine these two groups into one for purposes of study. The hope is, of course, ultimately to discover an etiologic classification rather than to depend upon the present one, based essentially upon age and a description of symptoms, the so-called diagnosis arrived at by the process of exclusion.

In such a combined study of 200 patients (4), 100 each with the conditions primary behavior disorders and psychopathic personality, further statistical evaluations were obtained. There was a higher incidence of paroxysmal EEGs (14 percent) in patients with primary behavior disorders than in those with psychopathic personality (2 percent). This would suggest that more patients with pre-clinical epilepsy were included in the former than in the latter group. When both groups of patients were combined, significantly greater proportions of abnormal EEGs were found when there was either a family history of epilepsy, maladjusted personality, chronic alcoholism or psychosis than when there was no history of such. In addition, significantly greater proportions of abnormal EEGs were found when there was either a personal history of convulsions, head injury with unconsciousness, severe illness, questionable birth injury or prematurity than when there was no such history. The younger the patient at the time of the illness and the more severe the illness, the greater was the probability of abnormal electrocortical activity.

These statistical relationships suggest the operation of genetic and histogenic factors in the causation of the abnormal EEGs in these two conditions. The genetic inferences are certainly supported by current knowledge of strong hereditary characteristics of electro-

cortical activity. This has been demonstrated repeatedly for epileptic persons, a great proportion of the seizure-free parents of epileptic children exhibiting abnormal waves and, conversely, the seizure-free children of epileptic parents showing a considerable amount of abnormal electrocortical activity (5).

The present study has been conducted to verify empirically the assumptions pertaining to hereditary determinants of electroencephalographic abnormality in our clinical groups. To this end, the relation of the EEGs of patients and their parents was studied

METHOD

Among 160 patients with primary behavior disorders, and 139 patients with psychopathic personality, on whom EEGs had been obtained, there were 40 patients on whose fathers and mothers EEGs had also been secured, and there were 18 patients whose fathers or whose mothers (one, but not both) had been recorded. Thus, there was a total of 58 patients and 98 parents. The age of these patients ranged from 4 to 29 years, with an average age of 13. The age of the parents ranged from 27 to 61 years, with an average age of 40.

The technique of obtaining the EEGs and the criteria for the selection of the patients have been discussed in considerable detail in previous publications and are generally accepted as standard (2, 3, 4). Suffice it to say that the electroencephalograms were obtained in the usual way, but the portion of the records obtained by hyperventilation was not used in the final evaluations; that the electroencephalographic records of the parents were read independently from those of the patient-offspring; that all those above the age of 16 were classified electroencephalographically according to the scale of Gibbs, Gibbs and Lennox (6); that all those below the age of 16 were classified according to Knott's scale (3) for children.

DATA

Table 1, in the first part, indicates the percentage distribution of certain electroencephalographic patterns among groups of patients with primary behavior disorders, psychopathic personality, and the parents of a representative combined sample of these two conditions. Of the 160 patients with primary behavior disorders, 9.4 percent had paroxysmal waves, 8.8 percent very abnormal waves,

waves in the first group may be due to the inclusion of a small group of patients with pre-clinical epilepsy. The older age of the second population would have assisted in automatically excluding that type of patient. The similarity in the electroencephalographic distributions of the first two groups would suggest that the populations are related.

Table 1, in the second part, presents the percentage distribution of certain electroen-

TABLE 1

THE PERCENTAGE DISTRIBUTION OF CERTAIN ELECTROENCEPHALOGRAPHIC PATTERNS

AMONG PRIMARY BEHAVIOR DISORDERS, PSYCHOPATHIC PERSONALITY, AND PARENTS OF A COMBINED GROUP OF THESE TWO CONDITIONS

Clinical group	No. cases	Electroencephalographic type				
		Paroxysmal	Very abnormal (S ₂ , F ₂ or C. A.)	Slightly abnormal (S ₁ , F ₁ or R. A.)	Questionably normal	Normal
Primary behavior disorders	160(100%)	15(9.4%)	14(8.8%)	49(30.6%)	13(8.1%)	69(43.1%)
Psychopathic personality	139(100%)	2(1.4%)	14(10.1%)	64(46.0%)	.....	59(42.5%)
Combined group	53(100%)	1(1.7%)	7(12.1%)	18(31.0%)	1(1.7%)	31(53.5%)
Parents	93(100%)	1(1.0%)	4(4.1%)	20(20.4%)	.....	73(74.5%)

AMONG NORMAL ADULT CONTROLS, RELATIVES OF EPILEPTICS AND EPILEPTICS (GIBBS)

Normal controls, adult.	1,000(100%)	9(0.9%)	11(1.1%)	138(13.8%)	.....	842(84.2%)
Relatives of epileptics..	202(100%)	12(5.9%)	8(4.0%)	75(37.1%)	.....	107(53.0%)
Epileptics (all ages)...	1,260(100%)	486(38.6%)	250(19.8%)	360(28.6%)	.....	164(13.0%)
Organic neuropsychiatric cases without epilepsy	418(100%)	5(1.2%)	181(43.3%)	75(17.9%)	.....	157(37.6%)

In this table and the following one very abnormal records, except for paroxysmal, are characterized by S₂, great amount of activity slower than 8½ per second in any lead; F₂, great amount of activity faster than 12 per second; or C. A., continuously abnormal, with no normal frequencies present. Slightly abnormal records are characterized by S₁, moderate amount of activity slower than 8½ per second in any lead; F₁, moderate amount of activity faster than 12 per second; or R. A., recurrently abnormal, in long bursts of several seconds.

and 30.6 percent slightly abnormal waves. The corresponding figures for the 139 patients in the group psychopathic personality was 1.4 percent paroxysmal, 10.1 percent very abnormal, and 46.0 percent slightly abnormal; for the 58 patients on whose parents EEGs were obtained, 1.7 percent was paroxysmal, 12.1 percent was very abnormal, and 31.0 percent slightly abnormal; for the 98 parents of the 58 patients, 1.0 percent was paroxysmal, 4.1 percent very abnormal, and 20.4 percent slightly abnormal.

Whereas the distributions for the first two groups and the combined sample from them were similar except for the increase in the percentage of paroxysmal waves for the group primary behavior disorders, the distribution for the parents differed from them. The higher incidence of the paroxysmal

cephalographic patterns among normal adult controls, relatives of epileptics, epileptics and organic neuropsychiatric cases without epilepsy. These data are borrowed from Gibbs (7). The electroencephalographic distributions for these groups differ considerably. The normal control population had an incidence of 0.9 percent paroxysmal waves; the relatives of epileptics, 5.9 percent; the epileptics, 38.6 percent, and the organic neuropsychiatric cases without epilepsy, 1.2 percent. Similar differences in the percentages are apparent in the very abnormal and the slightly abnormal categories of EEGs. The distribution for the parents of offspring diagnosed primary behavior disorders or psychopathic personality most resembles the distribution obtained on normal controls. The distribution which was most similar to the

distributions of patients with primary behavior disorders and psychopathic personality was the group of relatives of epileptics. However, the distributions for epileptics and organic neuropsychiatric cases without epilepsy differed quite radically from those mentioned above.

Table 2 presents the relationship between the EEGs of 40 patients to the combination of the EEGs of their respective parents. There were 22 pairs of parents both of whom had normal EEGs; 15 (68 percent) of their

This means that the difference could be attributed to chance in only 1 to 2 out of 100 experiments and is thus statistically highly significant. Thus, one may infer that the relationship between electroencephalographic abnormality of the parents and their patient-offspring is not due to chance. From this it would seem reasonable to conclude that electrocortical activity, normal or abnormal, in patients with primary behavior disorders and psychopathic personality has an hereditary determinant.

TABLE 2

THE RELATION OF ELECTROENCEPHALOGRAPHIC PATTERNS OF PATIENTS TO THE COMBINATION OF ELECTROENCEPHALOGRAMS OF THEIR RESPECTIVE PARENTS

Parents' electroencephalograms		Patients' electroencephalograms			
Combinations	No. of pairs	Normal and questionably normal	Slightly abnormal (S ₁ , F ₁ or R. A.)	Very abnormal (S ₂ , F ₂ or C. A.)	Paroxysmal
N x N	22 (100%)	15 (68%)	6 (27%)	1 (5%)	.....
N x S ₁ (or F ₁)	14 (100%)	4 (29%)	6 (43%)	4 (29%)	.....
N x S ₂ (or F ₂)	3 (100%)	.....	2 (66%)	.....	1 (33%)
P x S ₂	1 (100%)	1 (100%)	.....	.....	.....
Total	40 (100%)	20 (50%)	14 (35%)	5 (13%)	1 (2%)

patient-offspring had normal waves, 6 (27 percent) had a mild abnormality, and 1 (5 percent) had waves which were considered very abnormal. There were 14 pairs of parents, one of whom had normal, the other slightly abnormal EEGs; 4 (29 percent) of their patient-offspring had normal electrocortical functioning, 6 (43 percent) slightly abnormal; and 4 (29 percent), very abnormal. There were 3 pairs of parents, one of whom had normal, the other very abnormal EEGs; 2 (66 percent) of their patient-offspring had slightly abnormal waves and 1 (33 percent) had a paroxysmal record. There was 1 pair of parents, both of whom had abnormal electroencephalograms, whose patient-offspring had a normal record.

In considering these data in terms of normal or abnormal, 72 percent of the patient-offspring of parents having abnormal EEGs also had abnormal waves, while only 32 percent of the patient-offspring of parents with normal EEGs had abnormal records. In applying the method of χ^2 to these data to test whether the distributions differed significantly, it was found that the level of confidence was between 1 and 2 percent.

COMMENT

The data presented add a confirmatory link to the chain of statistical evidence indicating that electrocortical activity, normal or abnormal, in patients with either primary behavior disorders or psychopathic personality has an hereditary determinant. The data do not exclude the possibility of electroencephalographic abnormality arising from other sources although the majority would seem to be genogenic in origin. The higher incidence of electroencephalographic abnormality in those patients with personal histories of severe illness or injury would suggest the operation of a histogenic factor (4).

It has also been shown that heredity is a determinant of the electroencephalographic abnormality of epilepsy. These three groups of patients, primary behavior disorders, psychopathic personality and epilepsy, should not be thought of as constituting one population for not only do the first two groups differ clinically from the third, but electroencephalographically as well. That they might be related populations, could be postulated on the basis of a high incidence of electrocortical abnormality which, substantially

at least, is genetically determined. The kind and type of relationship awaits the analysis of additional data.

Irrespective of any relationship that may exist among these groups, epilepsy, primary behavior disorders and psychopathic personality, the meaning of the EEG in the latter two conditions becomes clear. The abnormal EEG is inherited in the majority of instances but may be acquired in the minority through the operation of histogenic experiences. As we have suggested before, the conditions diagnosed primary behavior disorders or psychopathic personality may be divided into two: those with normal electrocortical activity and those with abnormal electrocortical activity. The implication then, in general, is that the group with abnormal electrocortical activity has either a positive specific inheritance or has experienced at some time severe ill health, the latter not necessarily revealed through any clinical signs. The group with normal electrocortical activity has an inheritance of a different order and has had relatively good personal health. It would seem likely, therefore, that there may be some correlation between electroencephalographic activity and the structure of the personality, or the symptomatology in these clinical conditions. Such correlative studies are now in process.

SUMMARY

1. The electroencephalographic distributions for 160 children with primary behavior disorders, 139 adults with psychopathic personality and 98 parents of 58 patients were presented.

2. These were contrasted with the electroencephalographic distributions reported by Gibbs(7) for normal controls, epileptics and relatives of epileptics.

3. The electroencephalographic distributions of the parents of the patients approached the one for normal controls; those for primary behavior disorders and psychopathic personality were most similar to the one for relatives of epileptics but radically different from the one for epileptics.

4. The EEGs of 40 patients with either primary behavior disorders or psychopathic personality revealed a highly significant relationship to the combination of the EEGs of their respective parents.

We wish to thank Dr. F. A. Gibbs for his kindness in permitting us to use his data.

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HERPES SIMPLEX AND SECOND DEGREE BURN INDUCED UNDER HYPNOSIS

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Despite the existence of a growing body of literature concerning skin changes induced under hypnosis, reports of this type still meet with some degree of skepticism among medical men. Dunbar(1) surveyed the literature from 1910 to 1933 dealing with the psychogenicity of various dermatological disorders. Pattie(3), in his review of the literature on the production of blisters under hypnosis from 1885 to 1940, states that "in the last 55 years there have only been ten articles written in which investigators have reported the formation of blisters and given a reasonably full account of their procedure and control of the subject." He concludes that further experimental findings are needed to fully establish the phenomenon. Only by the reporting of *bona fide* experiments carried out under careful test conditions can skepticism be dispelled and the way paved for more fruitful investigation. It is with this in mind that the following report is submitted.

CLINICAL REPORT

The patient was a 27-year-old soldier of Swiss nativity. His past history was essentially negative for any physical disorders. Prior to the present episode he had never experienced any overt neurotic difficulties. In civilian life he earned his living as a circus parachutist. When the war broke out in Europe he volunteered in the French Army and fought for a time in Africa. He suffered a bayonet wound in his right wrist in an encounter with an Arab. He came to the United States in 1941 and soon thereafter enlisted in the American Army.

The history of his present illness had to be reconstructed from the information on his medical record. He stated that on December 21, 1944, he became blind immediately following an explosion of a shell not very far distant from him. He was taken to a clearing

company where the only pertinent information noted was that he was suffering from a bilateral loss of vision, probably as a result of a nearby shell explosion. He was then transported to an evacuation hospital, December 27, 1944. Here it was noted that the original injury occurred at 0700, December 21, 1944, in the vicinity of Bastogne, Belgium, following the explosion of an enemy phosphorus shell. The diagnosis was changed to hysterical blindness although it was felt that optic neuritis should be ruled out. The patient was sent to a field hospital, December 29, 1944, and to a general hospital in the Paris area January 1, 1945, where the present studies were carried out. He was admitted to the eye service. The ophthalmologist concurred in the diagnosis of hysterical blindness, bilateral, and the patient was transferred to the neuropsychiatric ward, January 3, 1945. General physical and neurological examinations were negative except for the functional loss of vision.

Hypnosis was attempted successfully on the day of admission to the ward. The procedure was as follows: The patient was asked to sit back in a comfortable chair in a relaxed position and with eyes closed. He was then given repeated suggestions pertaining to sleep. After twenty minutes he appeared to be in hypnotic trance and was made to re-enact his recent battle experience. At the first suggestion that he was again on the battle field there was a sudden change in his demeanor. He became extremely tense, grasped the arms of the chair and began to writhe backward, as if in an effort to seek cover. When told that the shell was exploding he tried to lunge toward the floor. At this point the examiner made an effort to terminate in gradual fashion the abreaction and to lend reassurance. The patient was repeatedly told that he was completely cured and had fully regained his vision. At the termination of this first hypnotic session he was able to see normally for the first time since the onset of his illness. He recalled nothing

¹ The author wishes to acknowledge the assistance of Major Henry Laven, M.C., A. U. S., in carrying out the experiments described in this paper.

of what had happened during the treatment and was quite amazed at his ability to see again.

At subsequent hypnotic sessions the procedure was essentially the same except that the time for induction was gradually reduced so that after the third trial the patient went under in a minute or less. All the sessions were characterized by complete amnesia for events which occurred while under hypnosis.

The experiments to be described were carried out in the presence of at least one other medical officer and more often two or three in addition to the ward nurse. On January 8, 1945, while under hypnosis, a second degree burn was induced on the dorsum of the patient's left hand in the following manner: Both hands were carefully examined and no abnormality was noted. The patient was again made to re-enact his battle experience, and at the point where the shell exploded he was told that a small particle of molten shell fragment glanced off the dorsum of his hand. Coincident with this, the examiner gently brushed the dorsum of the patient's hand with a small flat file (of the type commonly used in opening ampules). The file was at room temperature. There was immediate pallor in a circumscribed area about one centimeter in diameter at the point where the file made contact with his hand. After a period of twenty minutes a narrow red margin gradually developed about the area of pallor. Hypnosis was terminated at this point. On awakening, the patient appeared puzzled and asked if he had been smoking while asleep. He complained of pain in his hand and said that he felt as if he might have burned himself with a cigarette. One hour after the suggestion had been given early blister formation was noted. The patient had remained under the observation of the author and another medical officer (Major Laven) for this entire period of time. The patient was then dismissed and from the window of the office the examiner noted the following: The patient left the building to go to the mess hall. He stepped outside, picked up a handful of snow from the ground, and proceeded to rub it on the burn in an apparent effort to relieve the pain. The patient was examined in the afternoon,

approximately four hours after the initial suggestion had been given. At this time a full blister about one centimeter in diameter was noted. The patient was not under observation from the time he left the ward to the time of his return that afternoon. When questioned on his return, he could recall nothing relevant to the experiment other than the incident just described in which he applied a handful of snow to his hand. He said he did this just once, and kept the snow on his hand for only a few seconds. The following day the superficial skin had sloughed off, leaving a raw, denuded area beneath. This healed completely in the course of the following three days without leaving a scar.

On the day following the above experiment hypnosis was again induced in the presence of several members of the medical and surgical staff. While in hypnotic trance the patient was told that whereas his right hand would remain normal, his left hand would be completely anesthetic and also completely drained of blood. With a calibrated stylet of the type commonly used in taking blood counts and with the blade drawn up for maximum depth, one of the members of the medical staff stuck the middle finger of the patient's right hand. The patient winced, drew back, and droplet formation of blood immediately occurred. The same finger of the left hand was then punctured in exactly the same manner. The patient showed no signs of pain and seemed completely unaware of what had been done to him. In addition, no blood emerged from the puncture site.

During this same hypnotic session the patient was told that in the course of the next twenty-four hours fever blisters would form about his lower lip in the right-hand corner. This was accompanied by repeated suggestions to the effect that he appeared somewhat rundown and debilitated as a result of his recent experience. He was also told that he felt as if he were catching cold. At the time there were no evidences of any respiratory or other infection, nor of any incipient herpes or other lesions about the mouth. On the following morning, twenty-four hours later, there were multiple small blisters about the lower lip in the right-hand corner. The occurrence of one large blister and satellite smaller blisters at the mucocutaneous junc-

tion resembled an ordinary herpes in every way. The skin consultant who saw the patient at this time without knowing the history made a diagnosis of herpes simplex. During this twenty-four hour period, the patient remained on the ward and was at all times under the observation of the ward nurse or wardmen. He was not aware that the herpes was in any way related to the session of the previous day.

The burn effect on the hand simulated a true burn more closely than an urticarial wheal in the time it took to develop and the subsequent necrosis and sloughing off of epithelial tissue. With regard to this experiment, it should be pointed out again that the patient was not under observation from the time he left the physician's office to go to the mess hall up to the time of his return to the ward that afternoon. There is therefore only his word for the fact that he was unaware of the nature of the experiment and that he in no way attempted to induce a self-inflicted lesion. The observers noted the appearance of an early blister prior to the time the patient left the building. It was not felt that the application of the snow had any effect on the appearance of the full blister, although the possibility must be recognized that had the patient applied snow more vigorously or more often than he admitted, the physical trauma might have hastened the full development of the blister. The vasomotor control illustrated when the skin was punctured without ensuing bleeding is a well-known phenomenon capable of being elicited in many hypnotic subjects. The occurrence of what appeared to be a true herpes simplex (biopsy and histologic examination were impracticable at the time) is of interest.

It is felt that a definite affective change was brought about as a result of the suggestion that the patient was feeling tired, run-down and out-of-sorts, and that this was a necessary concomitant for the development of the herpes. This is in accord with Hull's (2) report of an experiment in which the herpetic blisters were induced in the hypnotic state by suggestion of an emotionally unpleasant experience in addition to direct suggestions concerning the herpes.

Whereas it is true that the explanation of these effects, particularly the blister forma-

tion and occurrence of herpes, is obscure, the author nevertheless feels that there is sufficient evidence to warrant acceptance of their production under hypnosis as a fact. In our present state of knowledge of neurophysiology it is difficult to speculate as to the mechanisms involved. There are many details lacking in the story of how the affect induced under hypnosis is interpolated at the various levels of integration of the central nervous system and exerts a specific effect on a circumscribed peripheral area. That the effect may be the result of antidromic impulses carried by posterior root fibers resulting in the liberation of H substances and wheal formation sheds little light on our understanding of the basic process. It is felt that further use should be made of the hypnotic technique as an experimental means of gaining insight into the relationship of psychic and physical processes.

SUMMARY

A 27-year-old combat soldier was admitted to a general hospital overseas because of hysterical blindness. He proved to be a good hypnotic subject and vision was restored after one session. In a subsequent hypnotic session a second degree burn with blister formation was induced on the dorsum of one hand. The blister was noted at the end of one hour and was fully developed approximately four hours later. A herpetiform lesion, clinically similar in all respects to a true herpes simplex, was made to appear in a specified area about the mouth twenty-four hours after the suggestion was given under deep hypnosis. In both instances there was an attempt made to induce affective changes in addition to the direct suggestions given. Under hypnosis it is possible to demonstrate an inter-relationship between the psychic processes and localized peripheral effects which far transcends the ability of the individual in the conscious state.

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PHOBIA AS A SYMPTOM IN HYPERTHYROIDISM

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In a previous study of patients with hyperthyroidism at the Lahey Clinic, one of us (B.J.F.) called attention to the close association between psychosomatic symptoms and borderline hyperthyroidism(1). The fine differentiation between true hyperthyroidism and chronic fatigue or neurocirculatory asthenia was stressed. Additional observation of patients in thyroid crisis brought to light the frequency of mental symptoms in hyperthyroidism(2). These experiences stimulated an interest in the unusual complaints manifested by patients with severe hyperthyroidism.

During the past two years 115 hyperthyroid patients were carefully questioned as to the presence or absence of phobias.³ No leading questions were asked; the only suggestive questioning was, "Are you very nervous?" By careful interrogation the presence of phobias was elicited without difficulty. These phobias were accordingly grouped as follows:

Type of phobia	No. of cases	Sex	
		M	F
Claustrophobia (fear of confined places)	45	2	43
Monophobia (fear of being alone) ..	22	..	22
Ochlophobia (fear of crowds)....	15	1	14
Acrophobia (fear of high places) ..	14	..	14
Anthrophobia (fear of men).....	5	..	5
Gynophobia (fear of women).....	4	4	..
Hematophobia (fear of blood)....	2	..	2
Nyctophobia (fear of the dark)...	2	..	2
Zoophobia (fear of animals).....	4	..	4
Taphephobia (fear of being buried alive)	1	1	..
Astraphobia (fear of thunder)....	1	..	1

From this survey it can be appreciated that phobia in excessive thyroid metabolism is not rare. It may easily be overlooked if the physician fails to recall that mental symp-

oms are often present in patients with hyperthyroidism.

Our study indicates that the most frequently encountered fear is claustrophobia. We remember quite vividly a 26 year old white female with severe hyperthyroidism. She developed a Bell's palsy for which diathermy was advised. It was impossible to treat her because she could not tolerate the diathermy pads on her face. The pads gave her a sense of crowding and frightened her similar to being in a closed room. She was quite intelligent, a college graduate, and volunteered the information that she had claustrophobia.

The second most common phobia in this series was the fear of being alone. Twenty-two of the patients studied offered this complaint. One middle-aged lady could not remain in her own home alone. When forced to do so, she would telephone her friends and talk for hours in trivial conversation. Following thyroidectomy, she became a tacit matron.

The opposite situation was observed in 15 persons. These individuals feared crowds and preferred to remain at home. This phobia often resulted in a pallid complexion, because of the lack of sunshine. Most of these persons would venture out of the house only in the darkness of evening.

Fourteen patients had acrophobia. One patient, a 38 year old housewife, lived in an elegant five room sixth floor apartment overlooking the river. Her fear of high places was so severe that she would not look out the window although the view was most beautiful. She constantly quarrelled with her husband since she wanted to move out of the apartment. The scarcity of living accommodations was the source of the familial discord.

A fearful dislike of the opposite sex was unfilled in 9 cases. Five women and 4 men were so afflicted. A patient, recently seen in consultation with an internist, could not eat

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³ Many of the cases studied were observed by the senior author during his Fellowship in Surgery at the Lahey Clinic, Boston, Mass.

in the presence of a woman. He could not give the reason for his behavior but it was a constant experience. One day his buddy invited him to his home for dinner. He was assured that no women would be present. During the course of the dinner, the friend's young married sister arrived unexpectedly; his appetite left him immediately. He could not take another mouthful of food. Following adequate thyroid surgery, he married, eventually becoming a proud father.

Other types of phobias in these patients were fear of blood, fear of the dark, thunder, and fear of animals. A most interesting hyperthyroid person was a middle aged man who had taphephobia. His fear of being buried alive was so fixed in his mind that he left instructions in his will for an autopsy on his body. Another patient had violent fear of thunder. During a rain storm she would hide under her bed or run down the cellar to hide until the storm subsided.

Two patients exhibited intense fear of blood. Both were young women; one of whom became frightened at her own menstrual flow. As time went on she commenced to dislike herself because she menstruated. Over a period of months she developed a hatred of menstruation as a womanly trait. Finally a homosexual temperament and characteristics became manifest. The other female patient feared the sight of blood to an unprecedented degree. She refused to eat red meat because of the blood. Fainting at the sight of someone bleeding was a common experience with her. In spite of this she adapted herself well to her menstrual cycle.

Following thyroidectomy and prolonged psychological therapy her hemophobia disappeared.

SUMMARY AND CONCLUSIONS

One hundred fifteen hyperthyroid patients were studied from a psychological viewpoint. The presence of phobias was discerned to be a presenting symptom. The majority of patients presenting phobias were women. Eight men were found to have this complaint. In almost all cases the combination of thyroidectomy and intensive psychotherapy resulted in a disappearance of the phobia. This survey argues for an adequate history-taking of patients suspected of possessing a phobia or presenting it as a major complaint. To label such persons as neurotics, neurasthenics or psychasthenics may be an injustice.

Additional information, an adequate physical examination and laboratory studies should be made to rule out underlying thyroid disease. In the particular field of hyperthyroidism the close cooperation of the surgeon and a competent psychologist often reaps a worthy reward. This cooperation on many occasions has saved the neurotic patient from a needless thyroidectomy; even as the surgeon's scalpel has eliminated prolonged psychological treatment of patients with hyperthyroidism.

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CASE REPORTS

A CASE OF ATABRINE PSYCHOSIS IN A CIVILIAN¹

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A review of the recent literature on atabrine psychosis reveals that the majority of reports stem from military medical establishments. With the low incidence rate reported, it is even more rare to see a case in a civilian in the United States. Newell and Lidz(1) reported two cases per 10,000 men treated with atabrine, a total of 28 cases. All but 2 received more than 0.3 gm. daily for 7 days. When the total dosage was decreased, the incidence of toxic cerebral symptoms was even less. They declare there is a definite relation between the rapidity of administration, size of dosage and production of a psychosis. Two cases who did not recover were considered schizophrenics, precipitated by the illness or therapy. In several controls the condition cleared when atabrine was withdrawn, recurred when it was resumed and cleared again when the drug was again withdrawn. In all the onset was sudden, with a picture of confusion with clouded sensorium. All but one case had tertian malaria. The treatment was discontinuance of the drug, forcing fluids, sedation and psychotherapy. Sheppeck and Wexberg(2) reported 19 atabrine psychoses in 4876 cases of malaria treated by atabrine. The incidence was higher in estivo-autumnal than in tertian malaria. They consider the psychosis not specific, corresponding to other toxic psychoses, with the prepsychotic personality probably accounting for the variations, such as manic, catatonic, paranoid or hallucinatory. Onset usually occurred approximately 2 days after the fever had subsided and no more parasites were found in the blood. Recovery was the usual outcome after discontinuance of the drug. There was no evidence that the dosage was responsible for onset of the psychosis, and individual idiosyncrasy or tolerance was considered to be the important

factor. One fatal case of quinacrine toxic delirium was described, with no significant findings at the autopsy. Eurnham(3) reported a case of a sailor who took 90 grains of atabrine with suicidal intentions. Recovery was complete without any apparent liver damage. In the Australian army(4) a 0.1% incidence was reported, 35 cases of 7604 malaria patients treated with atabrine. Treatment was palliative and all but 2 cases recovered within 23 days. Subsequently half of these patients were again given atabrine without reactions. Merger(5) reported one psychosis in a series of more than 1000 cases of atabrine-treated malaria. This was at first considered a cerebral malaria and the patient was placed on quinine. Complete recovery took place in 14 days. Two reports from the German literature(6, 7) give a comparable incidence. In both reports it is stated that treatment of the malaria was not interrupted, since it was not considered responsible for the mental symptoms.

CASE REPORT

A 23-year-old white female, born in the Dominican Republic, 3 months resident in the United States, was admitted to the medical service of the Bellevue Psychiatric Hospital, 21 November, 1946 from a general hospital, where she had been a patient for 24 hours. The accompanying report stated that she had been extremely agitated, hyperactive, shouting and impossible to control. When first seen by the writer the patient was heavily sedated with sodium amytal. Physical examination revealed a slender young woman with a slight atabrine discoloration. Temp. was 98.6, pulse 84, respirations 20 and B.P. 110/70. Findings were generally negative, with no splenic enlargement, no adenopathy, no jaundice. The next morning the patient was thrashing about in bed, pulling out of wrist and ankle restraints and tearing wildly at any clothes or bed coverings. She was constantly shouting and shrieking in Spanish, in a hoarse tone. She did not respond to any questions but appeared to recognize the presence of the examiner. Typical productions were: "I am dead, dead, dead. I have been dead for 5 (holding up 5 fingers) days, 5 weeks, 5 hours, 5 minutes. I am dead, dead, dead, they cut open my

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chest and took out my heart. It was a diamond, my heart, it is dead. I can no longer breathe, I am dead. My mother is gone, gone, mother, mother, mother, my father is dead, dead, dead, my father, my father, my baby, is dead, my baby, dead, dead, dead. Hitler, Hitler, Hitler, H-I-T-L-E-R, Trujillo, Trujillo, Truman, Truman, no want me here, Trujillo, Trujillo." Urinalysis was normal, the white blood count was 8,500 with 3 monocytes, 39 lymphocytes, 53 polymorphs and 5 transitional cells. The blood smear was negative for plasmodia.

The patient was so agitated that it was necessary to keep her under practically continuous sedation. When this was temporarily discontinued the patient presented the same picture as described above. This continued unchanged for 9 days and it was necessary to transfer the patient to the disturbed ward. Treatment was generally supportive. On the morning of the tenth day following admission the patient awoke completely clear of the psychosis; she was cooperative, quiet and was able to speak coherently and relevantly in her native tongue. She was quickly oriented as to time and place, and had a partial amnesia for the entire episode, stating that she remembered seeing the examiner and trying to tell him something.

History revealed that the patient had had an attack of tertian malaria in Santo Domingo 5 years previously. Two months after her arrival in the U. S., she developed daily attacks of fever and when the local district health center reported a positive smear, performed on November 14, she was given atabrine by her local physician, starting on November 16, with instructions to take one pill t.i.d. for 3 days, then one a day. On the 16th she took two atabrine tablets, and on the 17th she took the remaining 22 tablets, thinking those were the direc-

tions. Two days later she developed progressive irritability, depression, and was seen at the Vanderbilt Clinic with a temperature of 100, WBC of 14,600 with a normal differential. A thin smear showed no malarial parasites. Physical examination at that time was negative. Forced fluids and mild sedation were prescribed with instructions to the family to take her to Bellevue if the symptoms did not clear promptly. She was hospitalized the next day, and was discharged from Bellevue, November 30, recovered.

This case is reported to call attention to the possibility of its occurrence to practitioners who may be seeing more malaria than in the pre-war period.

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SHOCK THERAPY IN PSYCHOSES DURING PREGNANCY

REPORT OF ONE CASE¹

CARROL C. TURNER, M.D., F.A.C.P., AND LEONARD D. WRIGHT, M.D.

This case is thought to be of interest because of the paucity of literature on the use of shock therapy in psychoses complicated by, or during pregnancy.

Gralnick(1) reports 2 cases treated with the combination insulin and electroshock, with stillbirth (macrated fetus) in both cases. McConnell(2) reports the same experiences in 2 cases by using insulin coma. Goldstein, Weinberg and Sankstone(3) report one case using the combination insulin and electroshock without injury to the child.

Polatin and Hoch(4) treated 2 cases with electroshock that terminated in the delivery of normal babies. Sands(5) treated 2 cases by electroshock without injury to either of the babies.

The use of supplementary medication, such as pentothal and curare, has not yet been reported. On the basis of the reported cases, and the one that is to follow, it is not yet possible to draw any definite conclusions as to the safest method of treatment in these cases.

CASE REPORT

Mrs. B. W., age 22, white, 4 months pregnant, was admitted to the Carrol Turner Sanatorium

¹ From the Carrol Turner Sanatorium, Memphis, Tennessee. A preliminary report on this case was read before the Memphis and Shelby County Medical Society, February 18, 1947.

March 7, 1946. In the early part of pregnancy she suffered a moderate amount of nausea and vomiting. During the week prior to admission she had lost about 7 pounds in weight. There had been no unusual rise in blood pressure, edema of the ankles, headaches, visual disturbances, abnormal urinary findings, or symptoms of a polyneuropathy.

The patient had received a telegram the week before admission that her favorite uncle had died, and she seemed somewhat depressed over this. She had also begun to worry considerably over the conduct of a sister, whose husband had been killed overseas, and who had put her child in a Catholic institution. There were no abnormal mental symptoms prior to March 4, at which time she was playing cards and suddenly threw down the cards and ran upstairs crying. She was notably depressed and had difficulty in sleeping that night, and remained in bed the following day. For the next 2 days she continued to be depressed, tearful, and refused to eat. She was admitted to the sanatorium 4 days following the onset.

Past History.—Birth and early development apparently normal. The mother died when patient was 4½ years of age. As a child she was outgoing and mischievous and was not shy or sensitive. When she was 7 years old the father remarried, and she was apparently very fond of her stepmother. The father was a Jew, who was Presbyterian in religion. The mother was a Catholic and the stepmother a Reformed Jew. When the patient was 9 years of age, her father died, and she, with her stepmother, went to live with an uncle and aunt. Patient appeared happy there and made excellent grades in high school. She had planned to go to college, but during the Christmas holidays preceding graduation she met the man who is now her husband. They were married in 1941. This man was of the Jewish faith and she adopted his religion. Immediately after marriage she became pregnant. When 6½ weeks pregnant, she and her husband decided that it was too early to have a child, and an abortion was performed. No complications resulted. They were happy, except for the fact that the mother-in-law, a domineering, strong-willed type of individual, evidently influenced their marital life too much.

Physical Examination and Laboratory Procedures.—The blood pressure was 135/90. Pulse, 80. A normal 4-months pregnancy. Repeated urinalyses were normal. C.B.C. was normal.

Psychological Examination.—March 8, 1946, psychological examination reported an I. Q. of 82, dull normal.

Treatment and Course in Hospital.—On admission the patient was ambulatory, depressed, tearful talked of suicide, but suddenly changed to a mute, catatonic-like state, with refusal to eat. Treatment was begun with tube feedings, intravenous glucose, high vitamin therapy, hydrotherapy, and sedation. During the next 2 days the patient varied from a mute catatonic-like state to that of a confused state with hyperactivity, hallucinations, and delusions.

After two feeble attempts at suicide, we advised shock treatment, although there was a possibility

that complications, such as spontaneous abortion, or the birth of a dead fetus should the patient go to term, might follow shock therapy. The family considered these possibilities and readily agreed to shock, as the case had become more desperate.

Electroshock therapy, without the use of insulin, was instituted on March 11, 1946. From this time to April 23, 1946, 17 treatments were given at 1 to 3 day intervals, without apparent damage to the mother or the child.

The following notes from her chart describe the patient's condition during this period:

March 15—Psychological examination revealed improvement in I. Q.

March 17—Patient in a stuporous, catatonic-like state.

March 19—Patient pleasant, sociable, and showed normal interest.

March 21—Fetal movements were first noted.

March 22—Normal behavior. Intelligence test I. Q. 100.

March 23—Patient exhibited confused and weeping periods.

March 31—Bright, cheerful, but bordering on silly behavior.

April 5—Confused and delusional.

April 11—Manic excitement. Accusatory, abusive, and hallucinatory.

April 17—Manic excitement, confused, hallucinatory, delusional and an attempt was made to escape from the sanatorium.

April 18—Patient apparently normal and allowed more privileges. A visitor arrived at the sanatorium in taxi. Patient got into taxi and instructed driver to take her to her stepmother's home in Memphis. Her behavior during this short visit was within normal limits and patient was returned after a pleasant visit.

Following this episode, the patient's progress was satisfactory. She was complacent and exhibited entirely normal behavior. On April 27, she spent the week-end with her husband and returned on April 29 at which time he removed her from the sanatorium.

Progress after Discharge from the Sanatorium.

—On May 8, patient's stepmother reported that her behavior was perfectly normal. The only observation of abnormality was the fact that she seemed quiet and less active than prior to her psychotic episode.

On February 6, 1947, a letter from patient's uncle, who is a doctor, reported the following:

"Following her discharge from the sanatorium, she has progressed rapidly. Her mind has been clear and quick, though I did notice a mild depression at times, which lasted only momentarily.

On August 8, 1946, a five pound, twelve ounce girl, perfectly normal, was delivered by Caesarian section. At this time both tubes were ligated and cut. She made a remarkable recovery, and there has been no depression whatsoever since delivery. She has been a wonderful mother to her baby and is already talking about having another child.

The baby is bright, well trained, has one tooth, and can almost sit alone (six months)."

Summary.—One psychotic pregnant female was treated by electroshock therapy between the fourth and sixth months of pregnancy, without the use of supplementary medication. A total of 17 treatments, with major convulsions, was given. This patient went into labor at the normal time, and a normal baby girl was delivered by Caesarian section. At this time procedures for sterilization were carried out, at the request of her husband.

Follow-up in this case reveals a normal, healthy infant and a mother who has, apparently, fully recovered.

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COMMENT

PIERRE JANET

The recent death of M. Pierre Janet at 87 has removed one of the world's greatest figures in psychological medicine.

His family circle had been sadly disrupted during the war; he had lost his wife, his brother Jules, and his cherished son Michel; but his calm spirit did not falter; "Nous avons vécu tout de même," he wrote to Dr. William Russell, "et nous nous retrouvons, peut être, espérons le, pour une meilleure période."

Janet is best known through his masterly discussions of hysterical states and the obsessional neurosis which he explained as due to a general weakening of psychic activity or lowering of psychological tension. It is particularly in his psychological analysis of the neuroses that the work of Janet achieves historic significance, as Henri Ey points out, in establishing the transition from the nasographic systems of the 19th century to the so-called dynamic concepts of the 20th; and it is profitable to keep in mind his fine and conservative exposition of psychic events, unexcelled by any later writers. Worthy of quotation and underlining is his comment on the arbitrary and artificial separation of neuroses and psychoses. This differentiation, says Janet, may be "convenient in practice but is absolutely false from the clinical point of view. . . . The distinction may be acceptable to the police magistrate but is of no interest to the physician."

From his early experiments with hypnotism, while professor of philosophy at the Havre Lyceum, and his remarkable demonstration of manipulating at a distance the mind of the famous subject Léonie, down through his work at the Salpêtrière, where he was director of the psychological laboratory, his professorship at the Sorbonne, and eventually at the Collège de France, Janet

had become the dominating figure in French psychology and psychiatry.

Primarily a psychologist (he had received his doctorate in philosophy at the age of twenty-three) he later took his degree in medicine, and was thus exceptionally qualified for teaching and research in both normal and abnormal mental states.

To commemorate the opening of the new medical school buildings at Harvard University in 1906, President Eliot and Dr. J. J. Putnam, professor of diseases of the nervous system, invited Professor Janet to Boston to deliver a series of lectures on psychopathology. These lectures, some of which were also given at Johns Hopkins and Columbia Universities, were brought together in his well-known monograph "The Major Symptoms of Hysteria" (1907). The keynote, as he put it, was to show "how the study of the mental state of the patient can sometimes be useful to explain many disturbances and to give some unity to apparently discordant symptoms." Janet's definition of hysteria will be recalled, "Hysteria is a form of mental depression characterized by the retraction of the field of personal consciousness and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality."

His monumental and authoritative treatise on psychotherapy, which appeared in France in 1920 and has been translated into English, is a standard work of reference.

The loss of this great French scientist is keenly felt on this side of the Atlantic where he had many friends and followers. His youthful spirit will continue to inspire. He could have left no finer testament: "Il faut continuer a travailler pour remplir la vie, et il faut nous intéresser au travail des jeunes."

C. B. F.

UNESCO AND THE AMERICAN PSYCHIATRIC ASSOCIATION

The first National Conference on UNESCO, sponsored by the United States National Commission, was held in Philadelphia March 24, 25 and 26. Five hundred national bodies, among them the American Psychiatric Association, were invited to send representatives.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) is one of the special agencies set up by the Economic and Social Council for the purposes of attacking illiteracy throughout the world, to facilitate better educational methods, to assist those countries most in need to revive their damaged educational facilities, to remove barriers to international communication in its various forms, to assist with scientific development and exchange of scientific knowledge, to develop a better understanding of the cultural traditions and philosophies of other countries, and to study and ameliorate social tensions between nations which are conducive to war or prejudicial to peaceful international development.

The opening session was held in the Irvine Auditorium of the University of Pennsylvania and was presided over by Milton Eisenhower, chairman of the U. S. National Commission for UNESCO. Addresses delivered at this time and on the following night by distinguished speakers reviewed the history of the events that led to the founding of UNESCO, outlined the projects to be undertaken, and challenged the audience and the 500 national bodies there represented to grasp the importance of the problems UNESCO will attempt to solve, and expressed the hope that this increasing knowledge would lead to sustained effort on the part of all to work as diligently and optimistically for the winning of peace as had been done to win the war.

The second day of the conference was devoted largely to sectional meetings in which the representatives had their opportunity to contribute to the discussion. President Samuel W. Hamilton nominated Dr. George H. Stevenson, chairman of the Committee on

International Relationships of the American Psychiatric Association, to represent the Association at this conference and he attended the meetings of the section considering social tensions conducive to war. It was pointed out that the psychiatrist has a real and important interest in this field because of his experience with emotional tensions in individuals, at both the conscious and the unconscious levels. The effects of emotional disturbances on thinking and behavior in the individual and his social adjustments and maladjustments were emphasized as well as their counterparts in small groups and larger groups which are designated as nations. It was suggested that the methods of psychiatry in dealing with emotional difficulties and the sublimation of aggressiveness might be used advantageously in this study. The dependence of people on leaders and the need for an educated, broad-minded and ethical leadership were also stressed, because of the constant danger to the peace of the world if leadership is in the hands of fanatical, poorly trained or badly adjusted persons.

The social sciences are broadly represented in UNESCO—sociology, philosophy, psychology, religion, education, anthropology. The joint contributions of all these divisions, along with the contribution of psychiatry, should enable definite progress to be made in the improvement of the interpersonal relationships of people who speak different languages or who live on opposite sides of imaginary lines. Our Association is urged to give active support to the policies of UNESCO, and each member is invited to assist by submitting suggestions to the Committee on International Relationships, to be passed on to the UNESCO secretariat.

On the third day of the conference, the suggestions emanating from all the section meetings were ably summarized by Howard Wilson of the Carnegie Endowment for International Peace. It was indicated that the American Psychiatric Association would be consulted from time to time as UNESCO's program developed.

NEWS AND NOTES

VETERANS ADMINISTRATION NEWS.—Veterans Administration has estimated the nation's veteran population on February 1 to be 18,277,000, of whom 14,341,000 are World War II veterans.

Sites now have been selected for 68 of the 75 new hospitals which Veterans Administration is authorized to build and for which funds have been appropriated.

Approximately 5 million veterans have applied to date for education and training under the G.I. Bill.

Over 200,000 disabled veterans of World War II were in educational institutions or job training on January 31, under the Vocational Rehabilitation Act administered by the Veterans Administration.

Veterans Administration supplied disabled veterans with 437,883 prosthetic devices, ranging from arch supports to wheel chairs, during the fiscal year 1946.

Veterans Administration has approved for guarantee about \$3.5 billion in business, farm, and home loans for World War II veterans. This figure was as of February 20.

The number of Civil War veterans drawing pensions from Veterans Administration dropped from 154 on June 30, 1946, to 116 on January 31, 1947.

VETERANS ADMINISTRATION NEUROPSYCHIATRIC SERVICE.—The Veterans Administration reported a total of 548,749 admissions of veteran patients to VA and non-VA hospitals during the calendar year 1946, an increase of 174,342 or 61.3% over the calendar year 1945. The greatest number of admissions, 381,619 or 83.19% of the total, were general medical and surgical patients. Next were neuropsychiatric patients, amounting to 11.77% of the total, or 53,981 admissions. Smallest group was tuberculosis patients, who numbered 19,609, or 4.27% of the total. Slightly less than 50% of the total number of neuropsychiatric admissions, or 26,509 out of 53,981, were classified as psychotic cases.

Although neuropsychiatric patients in

1946 accounted for only about 12% of all admissions, nearly 55% of the total number of beds available in VA and non-VA hospitals are generally reserved for neuropsychiatric patients; on any single day, VA's total patient load includes nearly 53% neuropsychiatric cases.

The great disparity between the comparatively small number of neuropsychiatric patients admitted to hospitals, the number of beds set aside for their use, and the heavy day-by-day load of such patients results from the long periods these patients must spend in hospitals under treatment. This causes a much slower turnover in beds. During the fiscal year 1946, neuropsychiatric patients discharged from hospitals had an average stay of 197 days, compared with 34 days for general medical and surgical patients and 186 days for tuberculosis patients.

PARAPLEGIC CENTERS UNDER VETERANS ADMINISTRATION.—Seven paraplegic centers in hospitals strategically located from coast to coast have been established. Dr. Donald A. Covalt, chief of VA's medical rehabilitation service, reports that these centers, especially designed to treat veterans with spinal cord injuries that result in partial or complete paralysis of the body, are in operation in VA hospitals at Framingham, Mass.; Memphis, Tenn.; Van Nuys, Calif.; Staten Island, N. Y.; Richmond, Va.; Bronx, N. Y.; and Hines, Chicago, Ill. VA personnel skilled in this field have been assembled at the 7 centrally located hospitals over the country. This will permit veterans to receive the proper treatment and at the same time to be as close to their homes as possible.

Until recent years most spinal cord injury cases were doomed to a life of inactivity. In many cases, death resulted. Today, because of modern medical science and developments in the field of physical medicine, many paraplegics are able to lead active, productive lives. To treat each case properly, the services of the following medical team are

needed: neurologist, neurosurgeon, psychiatrist, urologist, plastic surgeon, orthopedic surgeon, doctor of physical medicine, physical therapist, occupational therapist, corrective physical rehabilitation officer, educational retraining officer, prevocational shop supervisor, social worker, and nurses.

VA has approximately 1,200 veteran patients suffering from injuries to the spinal cord. This number is expected to reach about 2,000 eventually.

AMERICAN OCCUPATIONAL THERAPY ASSOCIATION, NATIONAL CONVENTION.—The American Occupational Therapy Association will hold its national convention at Hotel Coronado across the bay from San Diego, Calif., October 31 to November 7, 1947. Special plans are being made for this convention, which marks the thirtieth anniversary of the Association.

LASKER AWARD, 1947.—This year's award of \$1,000 for outstanding service in mental hygiene will be presented for the most significant contribution to popular adult education, especially in parent-child relationships, as announced by Dr. George S. Stevenson, medical director of the National Committee for Mental Hygiene. The work of the candidates for the award must have been accomplished or generally accepted during the past year or two. Presentation of the award will be made at the annual meeting of the National Committee for Mental Hygiene, to be held on November 12 and 13 in New York City.

SALARY RATES IN SOCIAL WORK.—The Russell Sage Foundation has published the report, "Scheduled Salaries for Social Work Positions in Hospitals in New York City, December, 1946." Related conditions of employment, in both government and voluntary hospitals, are considered in addition to salaries. The results of the survey, it is believed, will be immediately useful both to employing agencies and to individual social workers in evaluating present salaries. The pamphlet is available from the Russell Sage Foundation, New York City, at a price of 40 cents.

THE AUSTEN RIGGS FOUNDATION.—Dr. Robert P. Knight, at present chief of staff of the Menninger Clinic, has been appointed medical director of the Austen Riggs Foundation, Stockbridge, Mass. He will assume his duties on September 1. The Austen Riggs hospital was founded in 1919 by the late Dr. Austen Fox Riggs, for the treatment, study, and training in therapeutic procedures of the psychoneuroses.

PSYCHIATRIST, PORTLAND CHILD GUIDANCE CLINIC.—A community child guidance clinic, with the financial backing of the Community Chest, has been recently established in Portland, Oregon. There is an opening for a full-time psychiatrist and clinical director, with a salary between \$10,000 and \$12,000 a year. Persons interested in this position should write to the Board of the Community Child Guidance Clinic, c/o Council of Social Agencies, the Terminal Building, 12th and S.W. Morrison, Portland, Oregon.

PSYCHIATRIC DEVELOPMENTS IN CALIFORNIA.—The State of California has recently embarked upon a new and progressive program for the prevention and treatment of mental disease and mental deficiency, and preparation is under way for the construction of several new mental institutions and for the modernization of existing facilities.

The director of the Department of Mental Hygiene has appointed Dr. Lawrence Kolb, former chief of the Mental Hygiene Division of the U.S.P.H.S., to the position of deputy director, medical, to develop and administer a program of raising treatment standards to the highest possible level and generally to promote mental health in the community. A new position of director of clinical services has also been established at each one of the mental institutions. These positions carry responsibility for the supervision of medical activities in the institution and the development of a teaching and research program. The clinical directors will be relieved of administrative responsibilities as far as possible so that they may devote their full attention to the medical aspects of their work.

Each hospital is to have a psychiatric

superintendent of nurses and psychiatric nursing instructor. The central office in Sacramento will have a nurse coordinator, and these nurses together with the clinical directors of the hospitals will put on a training program for nurses and attendants. The hospitals will need additional physical therapy technicians, hydrotherapists, and occupational therapists. Each institution will have a beauty parlor for the women, and recreational and music therapy will be established. In addition to the full-time physicians, each institution will have a corps of consultants. The number of technicians, dentists, and dental assistants is being increased. The increase of services in general applies both to the mental hospitals and to the homes for feeble-minded.

In addition to the hospital program, the central office is planning to carry on an educational program in mental health and to administer mental health clinics. The present legislature is expected to approve 4 additional mental health clinics to be located at strategic places. Each of these clinics will have 2 psychiatrists, 1 psychologist, 3 social workers, and 2 clerks. From these central clinics certain outlying districts will be covered at periodic intervals.

The social service program has been reorganized in order to make it more efficient by centralizing certain activities, and further expansion is contemplated. The Department hopes to establish one or two hospitals for the treatment of chronic alcoholics and to carry on research activities in this field.

The Langley Porter Clinic in San Francisco, headed by Dr. Karl Bowman, is being well supported as a research, teaching, and treatment institution. It offers an intensive 12-week refresher course in psychiatry. A similar clinic is to be established in Los Angeles in connection with the new medical school to be built there by the University of California. Los Angeles already has a well-staffed and very active out-patient mental hygiene clinic. This will be integrated with the new Langley Porter type of clinic, which will be attached to the medical school and will also take care of about 150 in-patients.

The Department of Mental Hygiene wishes to call to the attention of psychiatrists, psychologists, nurses, social workers,

etc., throughout the country the fact that California has a shortage of personnel in these categories. At present positions are available for physicians and surgeons, psychiatrists, and clinical directors. Salaries range from \$345 to \$715 per month, depending upon experience and training. Veterans applying will receive special consideration for appointment and will receive extra credit in civil service examinations. Physicians who are licensed in any other state may practice in a California mental institution for one year before securing their California license. Inquiries should be addressed to F. E. Kline, State Personnel Board, 401 State Building, Los Angeles, Calif.

ALCOHOL STUDIES, CORNELL UNIVERSITY MEDICAL COLLEGE.—The Research Council on Problems of Alcohol, an affiliate of the American Association for the Advancement of Science, has undertaken to finance at the New York Hospital and Cornell Medical Center a 5-year \$150,000 research project directed mainly to the causes of alcoholism. The research work, which will be done by members of staff of both the New York Hospital and the Cornell University Medical College, will continue and expand studies that have been carried on by the two institutions during the past 5 years. It will be under the direction of Dr. Oskar Diethelm, director of the Payne Whitney Clinic of the New York Hospital.

MENTAL HYGIENE IN BUENOS AIRES.—Dr. Abraham Mosovich reports the establishment in Buenos Aires, under his direction, of a new mental hygiene clinic, organized according to American standards. The staff includes 3 psychiatrists, 2 pediatricians, 2 psychologists, 2 clinicians, 1 endocrinologist, 3 social workers, a child psychiatrist, and a school for reeducation, as an annex. The clinic is beginning a course on mental hygiene for teachers, social workers, and educators.

PANAMERICAN MEDICAL CONFEDERATION.—Dr. José Angel Bustamante, a founder and secretary of the Cuban Society of Neurology and Psychiatry and editor of the Cuban Review of Neurology and Psy-

chiatry, reports that at the first Panamerican Medical-Social Congress, held in the City of Havana during December 1946, fifteen Latin-American countries collaborated in the establishment of the Panamerican Medical Confederation.

President Harrison Shoulders and ex-President Gordon Heyd of the American Medical Association and Dr. Austin Smith, secretary of the Council on Pharmacy and Chemistry attended the Havana Meeting, and the question of uniting with the Panamerican Medical Confederation will be dealt with at the June meeting of the A.M.A.

The second Panamerican Medical-Social Congress will be held in Lima, Peru in December 1948. The Congress will represent all branches of medicine and there will be a section on psychiatry and neurology. North American physicians working in these fields are invited to contribute to the program of this section. Correspondence should be addressed to Dr. J. A. Bustamante, Malecon 61, Apartado 2589, La Habana, Cuba.

Countries participating in the founding of the Panamerican Medical Confederation were: Mexico, Guatemala, Salvador, Honduras, Costa Rica, Panama, Columbia, Venezuela, Uruguay, Argentina, Chile, Peru, Ecuador, Puerto Rico, Cuba.

AMERICAN JOURNAL OF OCCUPATIONAL THERAPY.—February, 1947, marked the initial number of the American Journal of Occupational Therapy, official publication of the American Occupational Therapy Association. Charlotte D. Bone is editor; she is assisted by 30 division editors who are concerned with the various aspects of the field of occupational therapy. There is also an advisory committee, on which Dr. William Rush Dunton is editorial adviser. The Journal is published bimonthly, and the subscription price is \$5.00 a year. Inquiries may be addressed to the American Occupational Therapy Association, 33 West 42d St., New York City.

Dr. Dunton has recently retired as editor of Occupational Therapy and Rehabilitation, which he founded 25 years ago. The publishers of this journal will continue its publication, with a slant that will appeal to physicians rather than to therapists, so that

there may be no conflict of interests. The editor is Dr. Sidney Licht, 30 Hillside Ave., Cambridge, Mass.

RESIDENCIES, PRATT DIAGNOSTIC HOSPITAL.—The Joseph H. Pratt Diagnostic Hospital, a unit of the New England Medical Center, announces psychiatric residencies one year in duration. Psychiatric patients number about 1,500 house cases and 500 out-patient cases annually. They consist largely of those with neuroses or emotional or personal complications of disease. There will also be a limited number of patients with psychosis. Residents' work will consist in diagnosis, workup, handling, and treatment of patients. Applications should be addressed to Mr. Richard T. Viguers, Administrator, 30 Bennet St., Boston 11, Mass.

BLIND VETERANS UNDER VETERANS ADMINISTRATION.—A survey made by VA's vocational rehabilitation and education staff revealed that nearly half the blinded veterans discharged by the Army and Navy up to the end of November, 1946, were either working or in training. Of the 1,133 veterans who lost their sight in World War II, 231 were in educational institutions. Farming, law, and social work are the most popular courses. Blinded veterans eligible for education and training under the Vocational Rehabilitation Act receive free tuition and fees and a subsistence allowance from VA, in addition to their disability compensation payments.

CHILDREN'S BUREAU CONFERENCE ON CEREBRAL PALSY.—The Children's Bureau on March 26-28 brought together in conference the medical specialists in the field of cerebral palsy and professional personnel from the related fields involved in the care, education, and training of spastic children. The conference was preparatory to a general expansion of services by the Bureau to this special group, made possible by the increased Federal funds for work with crippled children. The Bureau estimates there are 175,000 spastic children in the country, for whom little help has been available from either public or private sources.

The importance of providing continuity in the child's treatment, education, and training over the years was stressed throughout the conference. Major recommendations look toward a long-range program under Federal-State auspices. The service to be established would be a part of existing state crippled children's programs but would have as its nucleus a diagnostic unit set up in a medical center. Here the child could be studied by

medical specialists and also by psychologists, physical therapists, medical social workers, and teachers. Crippled children's clinics throughout each state would also be established. Special emphasis was given at the conference to the need for research and for education of parents, doctors, and the general public in regard to the problems of the spastic child.

SUGGESTED 3-YEAR FULL-TIME TRAINING PROGRAM FOR PSYCHIATRISTS

The AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC., submits the following suggestions for a training program.

1. One year of in-patient work with an adequate variety of psychiatric conditions.

2. Six months full-time out-patient clinic work, or its equivalent, with emphasis on the study and treatment of psychoneurotic patients, with a minimum of 20 interviews per week per resident.

3. Six months neurology— $\frac{1}{2}$ time clinical; $\frac{1}{2}$ time basic.

4. Six months half-time service in the psychiatric aspects of general medical and surgical conditions.

5. Six months half-time child psychiatry and experience in working with psychologists and psychiatric social workers.

6. Six months in specialized institutional psychiatry (feeble-minded, epileptic, forensic psychiatry, penology, drug and alcohol addiction, and so forth).

7. During these 3 years it is recommended that there be available teaching ward rounds, staff conferences, seminars, journal clubs, adequate psychiatric texts and peri-

odicals, participation in some phase of psychiatric investigation.

8. During these 3 years there should be adequate instruction in the basic psychiatric concepts as covered in the material recommended in the syllabus of the American Board of Psychiatry and Neurology.

9. In institutions in which there is no full-time senior staff there should be in the aggregate a minimum of 15 hours a week service by senior attending staff in capacities instructive to the resident staff.

10. In planning or evaluating training, one, two, or three year programs may be worked out to include various fractions of the foregoing suggested items. For instance, a resident may devote a full day or half day a week to the psychiatric aspects of medical and surgical conditions for a year or so while assuming major clinical responsibilities in a psychiatric hospital.

The only purpose in suggesting the foregoing program is to indicate a desirable spread of experience in the training of a psychiatrist. It is thought unwise for any teaching program to be rigidly or slavishly followed.

BOOK REVIEWS

AGNOSIA, APRAXIA, APHASIA, THEIR VALUE IN CEREBRAL LOCALIZATION. (Second edition, revised and enlarged, 1946.) By *J. M. Nielsen*. (New York: Paul B. Hoeber, Inc. 1946.)

As the title of this book indicates, it is a study of aphasia and related conditions, made with particular attention to functional localization in the cerebral cortex. The author, who is Associate Professor of Medicine (Neurology) at the University of Southern California, is an eminent neurologist who has devoted many years to the study of aphasia from the clinical and pathological standpoints. The first edition, published privately by the author in 1936, had a relatively small circulation, and this enlarged second edition will therefore be, for most medical readers, an entirely new book.

Aphasia presents one of the most difficult problems in the field of neurology. It is territory on which neurology, psychiatry, and psychology meet, where boundaries are sometimes impossible to define and terminologies become dangerously confused with one another. The present author has kept this clearly in mind and has given a clear-cut and objective account of this difficult subject. His approach is that of a clinician with an interest in the "philosophy of cerebral function," and he tries, as far as his facts will justify it, to analyse the varied disturbances of speech function in terms of localized cortical lesions.

The book begins with an historical introduction and a detailed definition of terms, including a discussion of the various disturbances of the body scheme. There follows in the main part of the book his evidence for cerebral localization of speech, an analysis of selected cases, with the location of the pathological lesions found in each. A number of the cited cases have been taken from Henschen's monumental work, but many interesting and important cases studied by the author have been described in detail. The majority of the lesions were vascular in type, though some were examples of surgical removal of tissue. There is a useful section on methods of examination and a good bibliography of the subject of aphasia. The appendix contains an excellent summary of the main argument of the book with a section on the complicated terminology of aphasia, agnosia, and apraxia.

This is an important book, which will stimulate new interest in clinical study of aphasia and cerebral localization, at a time when interest has lagged, and the trend of thought has been away from strict localization of the function of speech, with emphasis on psychological analyses of aphasia. The author makes a strong case for the localization of speech functions in a number of interrelated centers in the major hemisphere, and he distinguishes various types of aphasia, based on the localization of the lesion. In this he is reemphasizing the rather "schematic" views of some older students of aphasia. He stresses the important role of the minor hemisphere in the recovery of speech after destruction of centers in the major hemisphere; this will be a

new idea for many readers. He introduces the new concept of a "language formulation area" or near Brodmann's Area 37 in the major temporal lobe, though his argument here is sometimes hard to follow. He draws attention to an important anatomical area in the brain, "the temporal isthmus," a narrow band of white matter connecting temporal lobe to the rest of the cerebral hemisphere. This is a veritable "crossroads" through which pass the visual, auditory, and other thalamo-cortical radiations, and many commissural and association bundles. Lesions in this area of the major hemisphere will result in marked aphasia, in addition to other neurological changes.

Some of his conclusions are, of necessity, tentative and must await confirmation from future studies following surgical removal of well-defined cortical areas; but his analysis does lay careful ground work upon which such studies must be based.

The reviewer feels that the book would be more readable if the material were better arranged, with less repetition, and with more concise presentation of clinical-pathological studies. One would also like to see some discussion of the practical problems of speech therapy in aphasia.

The book is of monograph size, well printed and bound, and the illustrations are satisfactory throughout. It is highly recommended to neurologists, psychiatrists, and all others interested in the "philosophy of cerebral function."

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Montreal.

SCIENCE FOR DEMOCRACY. Edited, with an introduction, by *Jerome Nathanson*. (New York: Kings Crown Press, 1946.)

This book is the result of a third series of conferences on "the scientific spirit and democratic faith" and presumably represents an improvement over its predecessors. It is divided into four sections: (1) Science in the national economy, with papers by Paul B. Sears, Jerome Frank, and Robert S. Lynd concerned with the importance of conservation and the dangers of reading Hayek. (2) The challenge of science to social thinking, with papers on "Freedom and Abundance" by K. F. Martin, in which the all-time high for the claims of science seems to be reached in a statement that "there is enough and to spare of all the necessary raw materials to provide the physical basis for the efficient, comfortable existence of every human being who is likely to be born anywhere on the earth during the next 2000 years at least" (p. 29), and "Psychiatry Comes of Age" by J. A. P. Miller, a moderate and interesting discussion. (3) Symposium: "Does Private Industry Threaten Freedom of Scientific Research," with much on patents and an important statement that "colleges and universities should be told . . . that they should not engage in research for a private concern" (p. 108), and "The Role of Science in Determination of Democratic

Policy," with an interesting statement that "often it is the social scientist's presence and prestige, rather than his knowledge, that are wanted" (p. 121).

The symposiums illustrate most clearly the strong and weak points of this type of publication. An occasional illuminating comment is made, and much is said that should never have been printed. The volume would have gained immensely by reduction to pamphlet size. In spite of careful editing, an impression of confusion appears inevitable. The diversity of personnel with over 30 participants and the contrast between those with a capacity for saying little in many words and those saying much in few words and those saying nothing imply difficulties which even the most competent chairmen cannot overcome. The whole gives an impression of pretentiousness and lack of penetration, but the book trade is apparently an insuperable obstacle to the publication of pamphlets, and prestige demands that words spoken should be permanently recorded.

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HYPNOANALYSIS. By *Lewis R. Wolberg.* (New York: Grune and Stratton, Inc., 1945.)

This book unquestionably constitutes a highly significant contribution to the literature. It is a simple straight-forward comprehensive account of the successful psychotherapy of a schizophrenic patient of the hebephrenic type by the use of hypnotic and psychoanalytic techniques, singly and in combination. Furthermore, its author is a psychoanalyst of good repute, well-respected by his colleagues, modest and conservative in his claims, and the book contains additionally, an excellent psychoanalytically oriented interpretation of the patient's clinical history by Kardiner.

Hence any review, as can readily be appreciated from the reviews that have already appeared, is necessarily a difficult task because of the numerous heresies the author commits, and which, fortunately, serve for the advancement of psychiatry, psychoanalysis, and hypnosis.

Mention should be made of a few of these heresies. In the first place, even though the author is a psychoanalyst, he disregarded Freud's harsh judgment against hypnosis which has been so blindly and tenaciously adhered to despite the constant growth of evidence to the contrary. It is bad enough for an opponent to expose a truly great man's error, but it is practically unforgivable when a follower does so. It necessitates a reassessment of psychoanalytic teachings and judgments on hypnosis all along the line with the reversal of many an attitude and opinion, and a recognition that mere entrenchment of beliefs does not make them valid.

Secondly, the author, as has been pointed out by another reviewer, has had the poor judgment to present a case of the successful psychotherapy of a hebephrenic schizophrenic when everybody knows that hebephrenia is really not accessible to psychotherapy, especially one showing obvious personality deterioration as did Wolberg's patient. Whatever the protests and condemnations this heresy evokes, it is time that established belief and opinion were routed from the chair of judgment and replaced by

facts of accomplishment. Naturally it is painful and difficult to accept revision of cherished beliefs, but in any science as young as psychotherapy, established traditional beliefs have no place. Facts and accomplishments only are important.

Then, too, psychoanalysis has long been recognized as the "most effective and adequate form of psychotherapy." Hence, there was no excuse for the author to utilize both hypnotic and psychoanalytic techniques, except, of course, the excuse of scientifically oriented research which culminated in a successful therapeutic accomplishment. This, too, will necessitate a revision of opinionated ideas and force a revision and improvement of current concepts of psychotherapy, rather than a continuance of traditions. This statement is not intended to minimize the tremendous significance of Freud's contributions to psychotherapy; rather, it is intended only to emphasize Freud's own statement made in 1919, namely, that the development of psychoanalytic therapy would proceed in a fashion different from the established classical or orthodox procedure. Wolberg's book is an outstanding example of such development.

There are other comments to be made about Wolberg's book, some of which have been emphasized by other reviewers. One of these is that it is deficient in that it does not elaborate extensively regarding either hypnosis or psychoanalysis. This reviewer agrees with that criticism, but regards it as irrelevant since Wolberg's purpose was to present an adequate account of his research in the hypnoanalysis of a psychotic patient, and he cannot be held responsible for more than that.

The book properly is not intended as an encyclopedia on hebephrenic schizophrenia, psychoanalysis, hypnosis, or psychotherapy. It is only a revealing, informative, instructive and adequate account of the successful use of hypnosis and psychoanalysis in the therapy of a single patient, conservatively and modestly reported, and in a fashion that will enable others to apply intelligently similar measures and procedures. More ought not to be asked of one book.

Other criticisms concern the limitations of hypnotherapy, the impossibility of applying deep hypnosis to a sufficiently large number of patients, the importance for hypnoanalytic therapy of somnambulism, the difficulties in combining psychoanalytic and hypnotic techniques and a variety of other objections, which, in the experience of this reviewer, are arm-chair judgments that ought not to be regarded as valid criticisms, but rather looked upon as signifying problems requiring research rather than pronouncements.

As for the actual contents of the book, one needs to read the book in full to gain an appreciation of how much valid work in hypnosis has been accomplished in the last fifteen years and how well the author combined those techniques with psychoanalytic techniques and actually applied them effectively to a most difficult problem in psychotherapy.

The book is well written, easy to read, and commands full interest, and is deserving of the highest praise.

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MODERN PSYCHIATRY. By William S. Saller, M. D.
(St. Louis: C. V. Mosby Co. 1945.)

This text on Modern Psychiatry is unusual in both its arrangement and content. In it, the author has presented a well-organized concept of psychiatry and of psychological processes as they appear to him in the light of recent developments in the field.

The book is the result of much practical experience with psychiatric patients correlated with considerable reading and much reflection on the part of the author. It is unfortunate that much of the material quoted is insufficiently substantiated either in the text or by an adequate bibliography and that repetition and a certain looseness of thought or of verbal structure make some of the conclusions difficult to understand.

The book is however well arranged. Part I,—231 pages in which the author discusses personality problems,—is largely the personal reflections of the author as a result of many years of experience. That his experience is wide enough in some fields is doubtful. In his treatment of the psychiatric problems of childhood he disagrees with Freud as to the importance of early sex trauma stating merely that "my long study of these cases does not confirm this claim—." A precept,—"Teach the child that crying will get him nothing" is surely one to which not many except the author will today adhere without further explanation.

In parts II and III, the psychoneuroses and psychoses are defined and discussed. This is the best part of the book. In it the conventional definitions and concepts of these disorders are set down in good order and at some length, together with some documentation concerning the ideas of previous authors on the points discussed. There is little mention of the most recent material however. Here, as in the first section, the observations resulting from personal experience are interesting. But the constant use of the personal pronoun in a text of this size is annoying and detracts from the weight of the opinions stated. The verbosity and use of informal language are distracting for the same reasons.

The last section, on psychotherapeutics, is the poorest. The sub-headings,—suggestion and hypnosis; psychiatry and the psychiatrist; sublimation and fears; habit and self control; philosophy and religion,—will indicate its scope. It gives no feeling that there is more than a slight and superficial understanding of any of the principles of psychology and psychodynamics upon which modern psychotherapeutic progress is founded.

The final chapters,—Schools of Psychiatry (a historical review), Bibliography (of three pages, for a text of 900 pages) and Glossary are totally inadequate. The glossary underestimates the intellectual calibre of a reader of even high-school age and culture.

Throughout the book the author presents his concept of personality and its disorders from a limited point of view. In discussing personality structure his use of the adjectives good and bad, selfish and unselfish or cynical and liberal-minded

are legitimate for such a personal presentation; they are not, however, usual in a text book of this size. They are, in addition, inconsistent with present-day concepts of the dynamics of personality, but there is no recognition of this fact.

In the opinion of this reviewer, were the book limited to perhaps 200 pages and were it entitled "*Personal Experiences in Modern Psychiatry*" or "*Reflections on the Present Ideas of Modern Psychiatry*" it would be a book of great interest to a limited audience. To this audience it would represent in condensed and more readable form, what it actually is,—a statement of personal beliefs and philosophical conclusions and, as such, a psychological study of an individual with many years of wide experience in the field of practical psychiatry.

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PSYCHOLOGY FOR NURSES. By Bess V. Cunningham,
Ph. D. (New York, London: D. Appleton-Century Co., Inc., 1946.)

This is a textbook on psychology written from the broad viewpoint of general human behavior but at the same time circumscribed within specific areas of nursing. The author has approached the study of man as a whole based upon the biological sciences but woven upon this general tapestry the particular patterns which will be of concern to the nurse. For instance, the reactions of the young child as a patient are discussed, and from this the nurse learns something of the parent-child relationships, theories of heredity, importance of environment, etc.

Not only will the student nurse find this text valuable in relation to her patients, but it should be an excellent means of developing understanding of herself and thus assist her in making adjustments and progress through the school of nursing. The section on study including note taking and other techniques should be especially valuable to the student who is beginning her course.

This textbook has been well illustrated. The terminology is simple and the subject matter clearly and concisely delineated. The explanations are adequate but not long involved discussions. At the end of each chapter there is a summary together with a group of suggested activities and a list of reference readings, all of which should be most valuable to the student.

It is the opinion of the reviewer that the study of this book should be a part of the curriculum of every student nurse.

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THE CARE OF THE AGED (GERIATRICS). By Malford W. Thewlis, M.D. 5th Edition, Thoroughly Revised with 65 Illustrations. (St. Louis: The C. V. Mosby Company, 1946.)

This book is divided into 8 parts which are concerned with general considerations, gerontology; medical-legal relations; miscellaneous geriatric problems; disease of metabolism and endocrine dis-

orders; infectious disease and focal infection; systemic pathology, and special topics.

From the psychiatrist's point of view, the air of optimism which pervades this book on geriatrics is one of its greatest contributions. There is always a feeling that not only must something be done for the aged but that a good deal can be done. The author is specific in his recommendations regarding therapy; he doesn't simply advise hobbies and activities but specifically devotes a whole chapter to the subject, discussing the pros and cons of various specific hobbies, sports, games, etc. There is a special chapter on what the author calls logotherapy, pointing out that much can be done for or against the patient by the proper or improper use of words, and he gives numerous pertinent examples and suggestions.

This book does not deal primarily in psychiatry. It has a good psychosomatic orientation, and the anatomy, physiology, and pathology of the systems in health and disease are thoroughly studied as they apply to the aged. A sharp distinction is made between senescence and senility, the former being the normal for the aged and the latter, pathological. Comprehension of this distinction will lead the practitioner to a more scientific evaluation of symptomatology. It behooves the practitioner to be as familiar with the aspects of geriatrics as he usually is with pediatrics. This book should serve as a good standard text on geriatrics.

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PROBLEMS IN PREJUDICE. By *Eugene Hartley*, with a Foreword by Gardiner Murphy. (New York: King's Crown Press, 1946.)

This volume has been produced by the offset method. It contains a report of three studies in which the author has attempted to make an objective quantitative examination of prejudice. The subjects were college students, and the questionnaire method was employed.

The major study is on the "generality" of the prejudice reaction. The results indicate that there is a pattern of prejudice ("a general American tradition of preference for members of certain ethnic groups") which is constant throughout the various student groups studied. This generalized pattern is not related to the actual contact an individual may have had with the members of the ethnic groups considered. The hierarchy of preference is to be found among practically all sections of the population. Even among members of minority groups the evidence of a constant general pattern is clear. The subject's "own group" is simply placed at the top of the list, and the rest of the pattern tends to remain intact. The generalized nature of the prejudice attitude was further demonstrated experimentally by introducing nonexistent ethnic groups with fictitious names. A high correlation was shown between prejudice toward real groups and prejudice toward fictitious groups.

Of the two minor studies included in the monograph, one deals with biographical material from which the author attempts a descriptive differentia-

tion between the "relatively tolerant" and the "relatively intolerant" types of personality. The second of the minor studies makes an effort to explore objectively William Stern's concept of "salience" in personality structure.

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NON-PROJECTIVE PERSONALITY TESTS. By *Harold A. Abramson and others*. (Annals of the New York Academy of Sciences, 46: 531, Article 7, 1946.)

This volume contains the papers presented, and the discussion which followed their presentation, at a conference held by the Section of Psychology of the New York Academy of Sciences on March 30 and 31, 1945.

Papers by Harold A. Abramson on the Minnesota Multiphasic and by George Killinger and Joseph Zubin on the Personal Inventory (NDRC) were discussed by Rose G. Andersen and Arthur E. Traxler.

A series of papers on the Cornell Selectee Index by Bela Mittelman and Kieve Brodman, Arthur Weider and David Wechsler, Harold G. Wolff and Harold J. Harris, were discussed by William A. Hunt, Morton A. Seidenfeld, and N. W. Morton.

Papers on the use of ability test patterns for personality study by Roy Schafer, Edith Wladowsky, and Zygmunt A. Piotrowski were discussed by F. L. Wells.

Papers on the theoretical principles underlying nonprojective tests by David Rapaport and Martin Scheerer were discussed by Joel Shor and Morris Krugman.

This collection of papers constitutes a useful supplement to the current literature on the use of psychological test aids in personality study.

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THE JEHOVAH'S WITNESSES. By *Herbert Hewitt Stroup*. (New York: Columbia University Press, 1945.)

This book, a study essay of the religious movement of the same name, presents about as much data as are obtainable by a nonmember or even a member not of the hierarchy of the movement. It presents an impressionistic picture of the average person who has accepted the presuppositions of the movement. Inasmuch as this interpretation of Christianity is comparatively new in the history of religion and a change in leadership introduces some modification in emphasis, and further since certain aspects of the whole are shrouded in secrecy, it is impossible for any author to speak with finality upon some important considerations.

The book is preeminently a sociological study through which the reader can clearly see the type of person who has been attracted to the movement, the individual who has been hurt by society as it is currently functioning, the disinherited who have been baffled by a system, the utter complexity of which makes it forever beyond their control. In harmony

with all apocalyptic movements, Jehovah's Witnesses anticipate the nearness of the Kingdom for which they long and their release from the intolerable aspects of life by the severity of the hardships which they must endure. This naive hope, supported by alleged historical facts, is such as to give vitality to those of the humble economic, social, and intellectual background from which adherents have been successfully recruited.

The rather dull but highly efficient mechanics of the movement have been carefully delineated by the author. He has left no doubt that this is a "religion of a book" but only as interpreted by the spokesman for the group. Loyalty to "the truth" has been measured for the most part by the tireless effort of Jehovah's Witnesses to sell the books written by the late president, Joseph F. Rutherford. There is no attempt to write a critique of their exegesis and no endeavor to examine their appropriation of history. The adjustments demanded by unfulfilled prophecies and exploded expectations have not been recorded. The author does not argue with them—he describes them.

The reader whose primary concern is with the nature of religion might well desire a clearer statement of psychological motivations and more definite evaluations of results in the practical issues of life. By inference the author has maintained that the movement is neither an unmitigated evil nor an unmixed good. A religious movement merits judgment on the basis of religious criteria. It is intellectually respectable? Does it satisfy a perpetual longing in man? Has it the power to create moral values for the individual? Is it of significant worth to society? The casual references to clashes of this movement with organized society, because of objectionistic attitudes toward vaccination, the use of aluminum cooking utensils, and patriotism such as flag saluting or their attitude toward war, do not provide an adequate basis for a value judgment of the movement. As a sociological commentary upon one phase of current religious life, the book, while dull reading, deserves the respect of thoughtful readers for what it purports to be.

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PEOPLE IN QUANDARIES. By *Wendell Johnson*, Ph.D. (New York and London: Harper & Brothers, 1946.)

This book in the narrower sense is addressed to the "maladjusted," but in its broader aspects to all those who view with dismay the destructive ends to which mankind persistently applies that scientific genius that offers such great promise for the good life. As the author observes, these abuses of scientific techniques can be traced to our failure to apply scientific methods of inquiry to those areas of our cultural experience where we have applied its products. The solution of the problem then, so stated, logically appears to be one of applying scientific methods of inquiry to matters of personal and social adjustment, which when carried to logical conclusion implies a foundation for resolving conflict on community, national, and international levels. This Dr. Johnson proceeds to show us how to do, from

the approach of general semantics, since in his opinion "the language of science is the better part of the method of science."

Contrasting the "language of science" with the "language of maladjustment" Dr. Johnson notes fundamental differences that reflect deeper differences in orientation. These differences he reduces to the principles of general semantics, showing how their violation leads to interpretations and evaluations of the nonverbal level of "reality" in terms of a static concept of reality instead of the dynamic, ever-changing process-like reality inferred by modern science; isolated entities instead of events; elementalistic schisms instead of space-time relationships; types and classes instead of subtly graded differences, and a high degree of unconscious self-projection. According to the author, this prescientific orientation toward ourselves and the world we live in inheres in and is fostered by the structure of our language, which, evolved in prescientific eras by primitive men with limited means of observation and inquiry, symbolizes a nonverbal level of reality vastly different in concept from that envisioned by modern science. Many of the confusions of mankind then, with their devastating consequences on our economic, social, and political life, not to mention personal adjustment, Dr. Johnson would attribute to two factors: misevaluations inherent in a language structurally inconsistent with the realities it seeks to symbolize, and failure to comprehend the inferential nature of our observations and the symbolic nature of language.

In the first half of the book an awareness of language as a form of symbolic behavior is developed in an explanation of the processes of abstracting involved not only in use of language but in making observations and evaluations. A series of practical techniques and working devices are presented to cultivate greater awareness of these abstracting processes. In the latter half of the book the author shows how the principles of general semantics operate by showing how they are violated in conditions of maladjustment. Schizophrenia is seen from this point of view as an extreme form of confusing and identifying the levels of abstracting; paranoia illustrates the extreme of unconscious self-projection; and the inferiority complex is viewed as a more or less universal symptom in a culture which fosters two-valued instead of infinite-valued orientations.

Drawing from his experience as a clinical psychologist the author shows how the principles of general semantics applied in this area would stress descriptive diagnoses in terms of behavior and the specific conditions that stimulate or limit it, on "causes" of maladjustive behavior only to the extent they can be directly related to specific maladjustment. In therapy, emphasis is placed on alterations in the general orientation of the individual in relation to his semantic environment as a prerequisite to altering the specific maladjustive symptom. A chapter on stuttering illustrates the practical application of these principles to treatment of a specific symptom regarded as one of evaluative maladjustment in a semantic environment which places high evaluation on speech fluency. All

through the book challenging implications for change from the general semantics approach are indicated in the fields of education, child guidance, clinical psychology, communications.

In applying himself to developing a greater awareness of language as a form of behavior that can ensnare and limit the thinking processes as well as implement them, in revealing the role of language behavior in developing false evaluations and assumptions, Dr. Johnson performs a service of considerable value to the reader sensitive to the needs and possibilities of self-adjustment who is continuously bombarded on all sides by an overwhelming flood of words exhorting him to feel, think, and act in a myriad of ways. But from the theoretical point of view it is necessary to point out certain conclusions, stated or implied by the author, that are to say the least open to question.

Dr. Johnson has described with great vividness the "schizophrenic" pattern of our culture in which the products of scientific techniques introduce chaotic discord into those institutions and traditions where scientific principles have not yet been fully applied. But his conclusion that the structure of our language is largely responsible for the freezing of prescientific orientations preserved in these institutions is perhaps an oversimplification. A relevant inquiry in this regard would be to ask if it is purely accidental or incidental that we have been able to free ourselves from the limitations imposed by our language structure in certain areas while we remain victims of language and the orientations it fosters in other areas. Dr. Johnson would apparently answer this in the affirmative. In speculating on the reasons why extensional (scientific) principles of living have not been taught to children along with their ABC's he concludes that it is simply because their parents and teachers have not known these principles. One might ask if a cart has not been placed before the horse in such statements as this: "The major advances in psychology that have been achieved during the past 30 years or so have been due largely to the increasing use of a language more highly descriptive of behavior." In stressing language as behavior the author points up a vital aspect of behavior functioning in maladjustment, but that it is the major determinant of orientation, as is so strongly implied in this and other statements, is what the author himself would probably regard as a one-valued approach to a question involving many factors.

It is regrettable that, in his discussion on the treatment of stuttering from a general semantics approach, the only specific case referred to is, as the author admits, an atypical one. In this case of an Indian youth who became mute after a brief period of stuttering on the belief that God had sealed his lips, the solution applied—which the author calls "ingenious"—was to convince him that God would be pleased if he would continue to speak and spread the gospel in spite of stuttering. In view of the author's dynamic approach to clinical psychology we trust that "treatment" in this case was also atypical.

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THIRTY-SECOND ANNUAL REPORT OF THE MUNICIPAL COURT OF PHILADELPHIA FOR 1945.

This is a volume of 405 pages with many statistical tables outlining the operations of the Municipal Court of Philadelphia in its 7 divisions: adoptions, civil, small claims and conciliatory, criminal, domestic relations, juvenile, and misdemeanors. An appendix contains most interesting articles by John O. Reinemann on "Where Do Philadelphia's Delinquent Children Live," by E. P. Corson-White on "Blood Grouping Tests as a Method for the Determination of Nonparentage," and by Karl Birnbaum on "The Question of the Defective Delinquent."

To be noted is the statement by President Judge Charles L. Brown that "this Court encompasses in its duties a greater variety of judicial problems than any other court in the world and has been so successful and so exemplary that it has become a model system emulated by many similar institutions throughout the world." Judge Brown claims that "delinquency may be said to be a mere reflection of the turbulence and violence of a chaotic state and is a form of protest consisting of two component parts: the individual nature of the delinquent and the exterior condition, i.e., physical, social and economic." "Children are very impressionable and readily influenced when subjected to the stimulation of the cinema, reading publications, and listening to disturbing radio crimes committed by adults who by their wits, hope to evade the law, even though guilty of the perpetration of crimes of a vicious character."

Juvenile delinquency has increased 56% in Philadelphia since 1940. However, it affects only about 2% of children of juvenile court age. "The great emphasis placed by the court on investigation and preliminary work is indicative of the tribunal's basic attitude toward juvenile delinquency. Not the offense so much as the personality of the offender is the most important consideration." Thirty-three percent of the boys were referred to the court for stealing, while 67% of the girls were referred for sex offenses. Only 18% of the population, 7 to 17 years of age in Philadelphia, were Negroes, but they furnished 45% of the individual delinquent children. Forty-one percent of the delinquent native white children of foreign or mixed parentage were Italians. Only 48% of 3,762 cases examined were of normal intelligence. Indicative of the enlightened viewpoint of this court is the fact that no less than 8 psychiatrists and 3 psychologists are attached to it. The number of psychiatric examinations during 1945 was 7,675; of these 53% revealed no neuropsychiatric abnormalities. The mental defectives comprised the largest group, 36%; the psychoneurotics, 2.3%; psychotics, 1.4%; psychopathic personalities, 1.1%; and alcoholics, 0.5%.

This report will well repay the attention of the sociologist, criminologist, and psychiatrist as well as the socially minded citizen.

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ANNUAL INDEX

This periodical is indexed alphabetically under both Subject (Part 1) and Author (Part 2) entries. In searching for a specific article the Author entry should be consulted if the name of the author is known, since the complete bibliographic reference is to be found after the author's name only. When there are two or more authors for an article the complete entry as shown appears only under the name of the first author. Under the name of each of the joint authors a cross reference is made to the original author entry.

The titles under the subject entries are often inverted or shortened. The Subject index covers original articles, biographic material, book reviews, obituaries, editorial comments and news items.

R. indicates a book review; the title of the book is followed by the author's name, and is also listed by author under Book Reviews. Ed. indicates an editorial comment or news item. Illust. indicates an illustration.

Memorial notices appear under the heading Obituaries and under the names of individuals.

Entries concerning all meetings of scientific bodies will be listed under Association meetings.

SUBJECT INDEX

PART 1

A

Addiction: Some Theoretical Considerations as to Its Nature, Cause and Treatment; J. D. Reichard, 721, May '47.

Administrative Psychiatry:

"It Can't Happen Here" (Ed.), 420, Nov. '46.

Review of Psychiatric Progress, 1946, Symp.; Winfred Overholser, 553, Jan. '47.

Age: See also Geriatrics.

Agnosia, Apraxia, Aphasia, Their Value in Cerebral Localization, 2nd ed.; J. M. Nielsen (R.), 84c, May '47.

Alcohol:

Alcohol, Science and Society at the Yale School of Alcohol Studies (R.), 281, Sept. '46.

Alcohol Studies, Cornell University Medical College (Ed.), 841, May '47.

Review of Psychiatric Progress, 1946, Symp.; Karl M. Bowman, 528, Jan. '47.

Alcoholism:

Glucose Tolerance in Chronic Alcoholism; Samuel C. Karlan, and Clarence Cohn, 247, Sept. '46.

Scientific Approach to Chronic Alcoholism; Research Council on Problems of Alcohol (R.), 285, Sept. '46.

Allergic Individual, Emotions in the; Frank C. Metzger, 597, Mar. '47.

American Board of Psychiatry and Neurology:

Dates of examinations, 565, Jan. '47.

Diplomates, 132, July '46; 567, Jan. '47.

New Headquarters, 277, Sept. '46.

Suggested Three Year Full-Time Training Program for Psychiatrists (Ed.), 843, May '47.

American Book Center for War Devastated Libraries, Inc. (Ed.), 276, Sept. '46.

American Group Therapy Association (Ed.), 276, Sept. '46.

American Journal of Occupational Therapy (Ed.), 842, May '47.

American Psychiatric Association:

A Word from the President, 709, Mar. '47.

Annual Meetings:

Chicago 1946—123, July '46.

New York 1947—Program, 422, Nov. '46; 564, Jan. '47.

Constitution, Amendment, 562, Jan. '47.

Group for the Advancement of Psychiatry, 564, Jan. '47.

News Letter, 423, Nov. '46.

Nominating Committee Report, 713, Mar. '47.

Proceedings, 102nd annual meeting, 249, Sept. '46; 381, Nov. '46.

Psychiatric Placement Service to be Continued, 566, Jan. '47.

The Psychiatric Foundation, 563, Jan. '47.

Aminophylline in Neuropsychiatric Disorders Associated with Cerebral Arteriosclerosis and Hypertensive Encephalopathy; Fritz Kant, and Hans H. Reese, 731, May '47.

Analgesia:

An Improved Method for Measuring Changes in the Pain Threshold Caused by Drugs; Frederic B. Flinn, and A. S. Chaikelis, 349, Nov. '47.

Annual Meetings:

American College of Physicians, 131, July '46.

American Occupational Therapy Association, 277, Sept. '46; 840, May '47.

American Physicians' Literary Guild, 426, Nov. '46.

American Prison Association, 425, Nov. '46.

American Psychiatric Association: See American Psychiatric Association.

American Society of Electroencephalography, 566, Jan. '47.

Association for Research in Nervous and Mental Disease, 279, Sept. '46.

Biological Photographic Association, 127, July '46.

Canadian Penal Congress, Windsor, 425, Nov. '46.

- Central Neuropsychiatric Association, 424, Nov. '46.
- Children's Bureau Conference on Cerebral Palsy (Ed.), 842, May '47.
- Court Psychiatric Clinics Conference, 131, July '46.
- Electroshock Research Association, 130, July '46.
- International Congress of Anthropological and Ethnological Sciences, 131, July '46.
- International Congress of Genetics, 710, Mar. '47.
- Korea, Seoul University Medical School, 129, July '46.
- National Committee for Mental Hygiene, 132, July '46; 711, Mar. '47.
- National Conference on UNESCO, 838, May '47.
- New York Psychoanalytic Society, 128, July '46.
- North Pacific Society of Neurology and Psychiatry, 423, Nov. '46.
- Panamerican Medical Coniederation, 841, May '47.
- Pennsylvania Psychiatric Society, 423, Nov. '46.
- Philadelphia County Medical Society, 427, Nov. '46.
- Philadelphia Psychoanalytic Society, 129, July '46.
- Psychiatric Nursing Institute, 129, July '46.
- Rehabilitation Conference, 710, Mar. '47.
- Science, Philosophy and Religion, 7th Conference, 424, Nov. '46.
- Southern Psychiatric Association, 425, Nov. '46.
- Western State Psychiatric Institute and Clinic, 127, July '46; 710, Mar. '47.
- Anoxia as Measured by the Electroencephalogram and the Interaction Chronogram on Psychoneurotic Patients; Jacob E. Finesinger, Erich Lindemann, Mary A. B. Brazier, and Eliot D. Chapple, 738, May '47.
- Anthropology:
Role of the Aged in Primitive Society; Leo W. Simmons (R.), 714, Mar. '47.
- Army: See also Army Air Force, Awards and Citations, Military Psychiatry, Navy, Rehabilitation, Veterans Administration, World War I, World War II, War.
- Army Medical Films (Ed.), 712, Mar. '47.
- Army Medical Library Microfilm Service (Ed.), 711, Mar. '47.
- Comparison between the Neuropsychiatric Screening Adjunct (NSA) and the Cornell Selectee Index (Form N); Harry C. Leavitt, 353, Nov. '46.
- Hypnosis in Treatment of Acute Combat Reactions; Fred D. Kartchner, and Ija N. Korner, 630, Mar. '47.
- Men with Brain Damage; John A. Aita, 205, Sept. '46.
- Mental Illness among Negro Troops Overseas; Herbert S. Ripley, and Stewart Wolf, 499, Jan. '47.
- Military Offences, Mediterranean Theatre of Operation; Morse P. Manson, and Harry M. Grayson, 50, July '46.
- Neuropsychiatric Disease in the Demobilized Veteran; Irving J. Burton, Merrill T. Eaton, Jr., and Herbert G. McMahan, 165, Sept. '46.
- Paranoid Officer and Officer Paranee; Harold Rosen, and Hugh E. Kiene, 614, Mar. '47.
- Personal Problems Related to Army Rank; Jerome D. Frank, 97, July '46.
- Pragmatic Psychotherapy in Military Training Centers; Bernard A. Cruvant, 622, Mar. '47.
- Psychiatric Screening Aid for Pre-Combat Troops; Oscar B. Markey, and Miles M. Zisson, 376, Nov. '46.
- Psychoneurotics in Combat; Marvin R. Plesset, 87, July '46.
- Psychosomatic Dermatological Syndromes in Military Service; Daniel J. Sullivan, and Eugene S. Bereston, 42, July '46.
- Psychotherapeutic Aspects of Symptomatic Treatment; Jerome D. Frank, 21, July '46.
- Psychotherapy in Military Training Centers; Bernard A. Cruvant, 622, Mar. '47.
- Racial Aspects of Emotional Problems of Negro Soldiers; Rutherford B. Stevens, 493, Jan. '47.
- Residuals of Combat Induced Anxiety; Charles O. Sturdevant, 55, July '46.
- Wechsler-Bellevue Scales in an Overseas General Hospital; Morton I. Teicher, and Erwin Singer, 91, July '46.
- Army Air Force:
 Accomplishments of Psychiatry in the Army Air Forces; John Milne Murray, 594, Mar. '47.
- Art in the History of Medicine. The 16th Century Cures for Lunacy; Clementa C. Fry, 351, Nov. '46.
- Atabrine Psychosis in a Civilian; Felix H. Ocko, 833, May '47.
- Attendants:
 Program for Training in Mental Hospitals; Laura W. Fitzsimmons, and Charles P. Fitzpatrick, 685, Mar. '47.
- Autism, Infantile, Irrelevant and Metaphorical Language in; Leo Kanner, 242, Sept. '46.
- Auto-Fellatio, Report of a Case; Morris M. Kessler, and George E. Poucher, 94, July '46.
- Autokinetic Phenomenon, An Experimental Study of Mental Patients through the; Albert C. Voth, 793, May '47.
- Awards:
 Awards and Citations, World War II, 118, July '46; 560, Jan. '47.
- Lasker Awards (1946), 425, Nov. '45; 840, May '47.
- Pi Lambda Theta Awards, 713, Mar. '47.
- B
- Behavior:
 Primary Behavior Disorders and Psychopathic Personality. II. Inheritance of Electro cortical Activity; Jacques S. Gottlieb, M. Coulson Ashby, and John R. Knott, 823, May '47.
- Problem Children with Abnormal Electroencephalograms, Dilantin Treatment; Charlotte F. Walker, and Barbara B. Kirkpatrick, 484, Jan. '47.
- Biochemistry:
 Glucose Tolerance in Chronic Alcoholism; Samuel C. Karlan, and Clarence Cohn, 227, Sept. '46.

- Review of Psychiatric Progress, 1946, Symp.; Orthell: Langworthy, and John Whitehorn, 515, Jan. '47.
- Biographical Sketch:**
- Bowman, Karl M., President 1944-1946; Harry C. Solomon, 18, July '46.
- Book Reviews:**
- Abrahamsen, David; Crime and the Human Mind, 572, Jan. '47.
- Abramson, Harold, et al.; Non-Projective Personality Tests, 847, May '47.
- Bierring, W. L.; Rypins' Medical Licensure Examinations, 142, July '46.
- Bochner, Ruth, and Halpern, Florence; The Clinical Application of the Rorschach Test, 429, Nov. '46.
- Brandt, Herman F.; The Psychology of Seeing, 720, Mar. '47.
- Burgess, Ernest W., and Locke, Harvey J.; The Family from Institution to Companionship, 716, Mar. '47.
- Burks, Barbara: See Cook, Robert, jt. auth.
- Campbell, John D.; Everyday Psychiatry, 282, Sept. '46.
- Caughy, J. L., Jr.: See Draper, G., jt. auth.
- Cavins, Harold M.; National Health Agencies, 137, July '46.
- Cook, Robert, and Burks, Barbara; How Heredity Builds Our Lives, 719, Mar. '47.
- Cunningham, Bess V.; Psychology for Nurses, (R.), 846, May '47.
- Draper, G., Dupertuis, C. W., and Caughy, J. L., Jr.; Human Constitution in Clinical Medicine, 137, July '46.
- Dumas, Alexander G., and Keen, Grace; A Psychiatric Primer for the Veteran's Family and Friends, 429, Nov. '46.
- Dunbar, Flanders; Psychosomatic Diagnosis, 717, Mar. '47.
- Dupertuis C. W.: See Draper, G., jt. auth.
- Ellery, R. S.; Psychiatric Aspects of Modern Warfare, 574, Jan. '47.
- English, O. Spurgeon, and Pearson, Gerald, H. J.; Emotional Problems of Living, 429, Nov. '46.
- Grinker, Roy R., and Spiegel, John P.; Men under Stress, 138, July '46.
- Grinker, Roy R., and Spiegel, John P.; War Neuroses, 140, July '46.
- Halpern, Florence: See Bochner, Ruth, jt. auth.
- Hartley, Eugene; Problems in Prejudice, 847, May '47.
- Heath, Clark W.; What People Are—A Study of Normal Young Men, 280, Sept. '46.
- Hewitt, Lester Eugene, and Jenkins, Richard L.; Fundamental Patterns of Maladjustment, 716, Mar. '47.
- Hinsie, Leiland F.; The Person in the Body, 576, Jan. '47.
- Hooton, Earnest; Young Man, You Are Normal, 430, Nov. '46.
- Jenkins, Richard L.: See Hewitt, Lester Eugene, jt. auth.
- Johnson, Wendell; People in Quandaries, 848, May '47.
- Kardiner, Abram, et al.; The Psychological Frontiers of Society, 283, Sept. '46.
- Karnosh, Louis J., and Zucker, Edward M.; A Handbook of Psychiatry, 142, July '46.
- Keen, Grace: See Dumas, Alexander G., jt. auth.
- Lawton, George; New Goals for Old Age, 141, July '46.
- Lewis, Nolan D. C.: See Reese, Hans H., jt. auth.
- Locke, Harvey J.: See Burgess, Ernest W., jt. auth.
- March of Medicine 1945; Modern Attitudes in Psychiatry, 715, Mar. '47.
- Masten, Mabel: See Reese, Hans H., jt. auth.
- Moore, Arthur Russell; The Individual in Simpler Forms, 720, Mar. '47.
- Municipal Court of Philadelphia 1945, 32nd annual report, 849, May '47.
- Nathanson, Jerome; Science for Democracy, 844, May '47.
- Nielsen, J. M.; Agnosia, Apraxia, Aphasia, Their Value in Cerebral Localization, 2nd ed., 844, May '47.
- Pearson, Gerald H. J.: See English, O. Spurgeon, jt. auth.
- Preu, Paul William; Outline of Psychiatric Case Study, 282, Sept. '46.
- Quarterly Journal of Studies on Alcohol*; Alcohol, Science and Society, 281, Sept. '46.
- Rank, Otto; Will Therapy and Truth and Reality, 136, July '46.
- Reese, Hans H., Masten, Mabel G., Lewis, Nolan D. C., and Sevringhaus, Elmer J.; The 1945 Year Book of Neurology, Psychiatry and Endocrinology, 139, July '46.
- Reich, Wilhelm; Character Analysis, 575, Jan. '47.
- Reich, Wilhelm; The Sexual Revolution, 575, Jan. '47.
- Reik, Theodor; The Unknown Murderer, 280, Sept. '46.
- Research Council on Problems of Alcohol; The Scientific Approach to Chronic Alcoholism, 285, Sept. '46.
- Richardson, Henry E.; Patients Have Families, 285, Sept. '46.
- Sadler, William S.; Modern Psychiatry, 846, May '47.
- Sevringhaus, Elmer L.: See Reese, Hans H., jt. auth.
- Shaikh, A. H.; Correctional and Rehabilitation Work, 716, Mar. '47.
- Silva, A. C. Pacheco e; A Assistência a psicopatas no Estado de São Paulo (Care of the Mentally Ill in São Paulo), 284, Sept. '46.
- Simmons, Leo W.; The Role of the Aged in Primitive Society, 714, Mar. '47.
- Smith, Hubert Winston; Scientific Proof and Relations of Law and Medicine, 286, Sept. '46.
- Spiegel, John P.: See Grinker, Roy R., jt. auth.
- Spurling, R. F. Glen; Practical Neurological Diagnosis, 715, Mar. '47.
- Stroup, Herbert Hewitt; Jehovah's Witnesses, 847, May '47.

- Temkin, Owsei; *The Falling Sickness*, 574, Jan. '47.
- Thewlis, Malford W.; *Care of the Aged*, 5th ed., 846, May '47.
- Wechsler, I. S.; *The Neurologist's Point of View*, 428, Nov. '46.
- Wolberg, Lewis R.; *Hypnoanalysis*, 845, May '47.
- Zucker, Edward M.: See Karnosh, Louis J., jt. auth.
- Boston Medical Center for Children (Ed.), 273, Sept. '46.
- Bowman, Karl M., Biographical Sketch, President 1944-1946; Harry C. Solomon, 18, July '46.
- Brain Injury:
- Men with Brain Damage; John A. Aita, 205, Sept. '46.
- Rorschach's Tests as a Diagnostic Aid in Brain Injury; John A. Aita, Ralph M. Reitan, and Jane M. Ruth, 770, May '47.
- Brain Metabolism in Man; Unanesthetized and in Pentothal Narcosis; Williamina A. Himwich, Edmund Homburger, Robert Maresca, and Harold E. Himwich, 689, Mar. '47.
- Brazil:
- A Assistência a psicopatas no Estado de São Paulo* (Care of the Mentally Ill in São Paulo); A. C. Pacheco e Silva (R.), 284, Sept. '46.
- Bromide Intoxication, Transitory Schizophrenias Produced by; Max Levin, 229, Sept. '46.
- Buenos Aires, Mental Hygiene in (Ed.), 841, May '47.

C

- California, *Psychiatric Developments in* (Ed.), 840, May '47.
- Cerebral Arteriosclerosis and Hypertensive Encephalopathy, Use of Aminophylline in Neuro-psychiatric Disorders Associated with; Fritz Kant, and Hans H. Reese, 731, May '47.
- Cerebral Lesion Resulting in Spatial Disorientation; A. Z. Pfeffer, E. D. Friedman, and S. Bernard Wortis, 72, July '46.
- Character Analysis*; Wilhelm Reich (R.), 575, Jan. '47.
- Cheney, Dr. C. O. Retires (Ed.), 274, Sept. '46.
- Child Guidance Clinics in New York State, Expansion (Ed.), 128, July '46.
- Child Psychiatry:
- Dilantin Treatment for Behavior Problem Children with Abnormal Electroencephalograms; Charlotte F. Walker, and Barbara B. Kirkpatrick, 484, Jan. '47.
- Irrelevant and Metaphorical Language in Early Infantile Autism; Leo Kanner, 242, Sept. '46.
- Medical Center for Children, Boston (Ed.), 273, Sept. '46.
- Review of Psychiatric Progress, 1946, Symp.; Leo Kanner, 530, Jan. '47.
- Treatment of Emotionally Disturbed Children, Illinois (Ed.), 277, Sept. '46.
- Use of Residence in Psychiatric Treatment with Children; J. Franklin Robinson, 814, May '47.

Clinical Notes:

- A Veteran Uses General Semantics for Rehabilitation, 113, July '46.
- Clinical Psychiatry (Review of Psychiatric Progress, 1946, Symp.); Nolan D. C. Lewis, 535, Jan. '47.
- Commitment of the Mentally Ill; Harold Rosen (Corresp.), 271, Sept. '46.
- Conditioned Responses:
- Conditioned Response in Emotional Disturbances of War; Norbert Bromberg, 26, July '46.
- Conditioned Response to Fellatio; A. C. Cornsweet, and M. F. Hayes, 76, July '46.
- Convulsive Shock Therapy: See also Electroshock Therapy, Insulin Shock Therapy, Shock Therapy.

Cornell Selectee Index:

- Comparison between the Neuropsychiatric Screening Adjunct (NSA) and the Cornell Selectee Index (Form N); Harry C. Leavitt, 353, Nov. '46.
- Minnesota Multiphasic Personality Inventory and Cornell Selectee Index, A. Rapid Personality Evaluation; Harry Grant, 33, July '46.
- Minnesota Multiphasic Personality Inventory in Clinical Practice, with Notes on the Cornell Index; Herbert C. Modir, 758, May '47.
- Correspondence:
- Dunlap, Knight, 117, July '45.
- Fung, George D., 117, July '46.
- Larson, John A., 271, Sept. '46.
- Rosen, Harold, 272, Sept. '45.
- Taintor, Eliot, 270, Sept. '46.
- Tiebout, Harry M., 270, Sept. '46.

Crime:

- Correctional and Rehabilitation Work*; A. H. Shaikh (R.), 716, Mar. '47.
- Crime and the Human Mind*; David Abrahamsen (R.), 572, Jan. '47.
- The Unknown Murderer*; Theodor Reik (R.), 280, Sept. '46.
- Crutcher, Hester B., Appointment to U. S. Public Health Service (Ed.), 712, Mar. '47.

D

- Dandy, Walter Edward, 1836-1946 (O.), 143, July '46.
- Delinquency:
- Correctional and Rehabilitation Work*; A. H. Shaikh (R.), 716, Mar. '47.
- Institutional Treatment of Juvenile Delinquents; Leonard M. Dub, 818, May '47.
- Dermatology:
- Herpes Simplex and Second Degree Burn Induced under Hypnosis; Mortague Ullman, 828, May '47.
- Psychosomatic Dermatological Syndromes in Military Service; Daniel J. Sullivan, and Eugene S. Bereston, 42, July '46.
- Dilantin Treatment for Behavior Problem Children with Abnormal Electroencephalograms; Charlotte F. Walker, and Barbara B. Kirkpatrick, 484, Jan. '47.

Directory of Psychiatric Clinics, U. S. (Ed.), 131, July '46.
 Drug Addiction: *See also* Addiction.

E

Electroencephalography:

Dilantin Treatment for Behavior Problem Children with Abnormal Electroencephalograms; Charlotte F. Walker, and Barbara B. Kirkpatrick, 484, Jan. '47.

Effects of Anoxia as Measured by the Electroencephalogram on Psychoneurotic Patients; Jacob E. Finesinger, Erich Lindemann, Mary A. B. Brazier, and Eliot D. Chapple, 738, May '47.

Electroencephalographic Patterns from the Base of the Brain; Milton Greenblatt, Daniel Funkenstein, Daniel Miller, and Max Rinkel, 749, May '47.

Review of Psychiatric Progress, 1946, Symp.; Frederic A. Gibbs, 519, Jan. '47.

Electroshock Therapy: *See also* Insulin Shock Therapy, Shock Therapy.

Electric Shock Therapy in Psychoneurosis; Donald M. Hamilton, 665, Mar. '47.

Respiration during Electric Shock Treatment; Mark D. Altschule, Wolfgang M. Sulzbach, and Kenneth J. Tillotson, 680, Jan. '47.

Emotions:

Conditioned Responses in Emotional Disturbances of War; Norbert Bromberg, 26, July '46.

Emotional Problems of Living; O. Spurgeon English, and Gerald H. J. Pearson (R.), 429, Nov. '46.

Emotions in the Allergic Individual; Frank C. Metzger, 697, Mar. '47.

Racial Aspects of Emotional Problems of Negro Soldiers; Rutherford B. Stevens, 493, Jan. '47.

Treatment of Emotionally Disturbed Children, Illinois (Ed.), 277, Sept. '46.

Endocrinology (Review of Psychiatric Progress, 1946, Symp.); Orthello Langworthy, and John Whitehorn, 515, Jan. '47.

Epilepsy:

Falling Sickness; A History of Epilepsy from the Greeks to the Beginnings of Modern Neurology; Owsei Temkin (R.), 574, Jan. '47.

Genetics of Epilepsy; William G. Lennox, 457, Jan. '47.

New Drugs in Epilepsy Therapy, Phenantoïn; Harry L. Kozol, 154, Sept. '46.

New Drugs in Epilepsy Therapy, Tridione and Mesantoin; William G. Lennox, 159, Sept. '46.

New Drugs in Epilepsy Therapy, Tridione in the Control of Psychomotor Attacks; Russell N. DeJong, 162, Sept. '46.

Psychotherapeutic Interviews in Treatment of Epilepsy; Oskar Diethelm, 806, May '47.

Review of Psychiatric Progress, 1946, Symp.; William G. Lennox, and Jean P. Davis, 522, Jan. '47.

State Hospital School for Epileptic Children; R. L. Dixon, 811, May '47.

Eugenics and Heredity (Review of Psychiatric Progress, 1946, Symp.); Franz J. Kallmann, 513, Jan. '47.

European Manuscripts on Medical and Related Subjects (Ed.), 712, Mar. '47.

Everyday Psychiatry; John D. Campbell (R.), 282, Sept. '46.

F

Falling Sickness; A History of Epilepsy; Owsei Temkin (R.), 574, Jan. '47.

Familial Care:

Family Care and Out-Patient Clinics in 1946 (Review of Psychiatric Progress, 1946, Symp.); Horatio M. Pollock, 542, Jan. '47.

Family from Institution to Companionship; Ernest W. Burgess, and Harvey Locke (R.), 716, Mar. '47.

Family Mental Disease in Private Practice; Abraham Myerson, 323, Nov. '46.

Fellatio, Conditioned Response to; A. C. Cornsweet, and M. F. Hayes, 76, July '46.

Fellowships:

Helen Putnam Fellowship for Advanced Research in Genetics or Mental Health (Ed.), 424, Nov. '46.

Forensic Psychiatry: *See also* Legislation.

Commitment of the Mentally Ill; Harold Rosen (Corresp.), 271, Sept. '46.

Law and Medicine Master Index to the Symposium Series; edited by Hubert Winston Smith (R.), 285, Sept. '46.

Review of Psychiatric Progress, 1946, Symp.; Winfred Overholser, 553, Jan. '47.

France, Letter from; P. Cossa, 433, Jan. '47; (Ed.), 563, Jan. '47.

Fundamental Patterns of Maladjustment; Lester Eugene Hewitt, and Richard L. Jenkins (R.), 716, Mar. '47.

G

General Medicine;

Psychotherapy for the General Practitioner, A Program for Training; Thomas A. C. Rennie, 653, Mar. '47.

General Semantics:

A Veteran Uses General Semantics for Rehabilitation (Ed.), 113, July '46.

New Institute Headquarters (Ed.), 425, Nov. '46.

Genetics:

Genetic Theory of Schizophrenia. An Analysis of 691 Schizophrenic Twin Index Families; Frank J. Kallmann, 309, Nov. '46.

Genetics in U.S.S.R. (Ed.), 125, July '46.

Genetics of Epilepsy; William G. Lennox, 457, Jan. '47.

Geriatrics:

Care of the Aged; Malford W. Thewlis, 5th ed. (R.), 846, May '47.

New Goals for Old Age; George Lawton (R.), 141, July '46.

Review of Psychiatric Progress, 1946, Symp.; Karl M. Bowman, 528, Jan. '47.

Role of the Aged in Primitive Society; Leo W. Simmons (R.), 714, Mar. '47.

- Glucose Tolerance in Chronic Alcoholism; Samuel C. Karlan, and Clarence Cohn, 247, Sept. '46.
 Group Psychotherapy as a Method of Treatment for Veterans; Martin Grotjahn, 637, Mar. '47.
 Group Therapy in Teaching Psychotherapy; Samuel B. Hadden, 644, Mar. '47.

H

- Hackfield, Mrs. Margaret, Appointment to Mental Hygiene Society, Hawaii (Ed.), 278, Sept. '46.
 Hamilton, Dr. Samuel W., President, Honored (Ed.), 275, Sept. '46.
Handbook of Psychiatry; Louis J. Karnosh, and Edward M. Zuker (R.), 142, July '46.
 Helen Putnam Fellowship for Advanced Research in Genetics or Mental Health (Ed.), 424, Nov. '46.
 Heredity:
 Family Mental Disease in Private Practice; Abraham Myerson, 323, Nov. '46.
 Genetic Theory of Schizophrenia. An Analysis of 691 Schizophrenic Twin Index Families; Franz J. Kallmann, 309, Nov. '46.
 Genetics of Epilepsy; William G. Lennox, 457, Jan. '47.
 Heredity and Eugenics (Review of Psychiatric Progress, 1946, Symp.); Franz J. Kallmann, 513, Jan. '47.
How Heredity Builds Our Lives; Robert Cook, and Barbara Burks (R.), 719, Mar. '47.
 Herpes Simplex and Second Degree Burn Induced under Hypnosis; Montague Ullman, 828, May '47.

Historical:

- Art in the History of Medicine. The 16th Century Cures for Lunacy; Clements C. Fry, 351, Nov. '46.
 History of the Development of the Concept of Functional Nervous Disease during the Past 2500 Years; A. Warren Stearns, 289, Nov. '46.
 Psychiatric Resources of New York; S. Bernard Wortis, and Morris Herman, 705, Mar. '47.
 Homosexual Woman, The; Jane MacKinnon, 661, Mar. '47.
Human Constitution in Clinical Medicine; G. Draper, C. W. Dupertuis, and J. L. Caughey, Jr. (R.), 137, July '46.
 Hyperthyroidism, Phobia as a Symptom in; Bernard J. Ficarra, and Ralph A. Nelson, 831, May '47.
Hypnoanalysis; Lewis R. Wolberg (R.), 845, May '47.
 Hypnosis:
 Herpes Simplex and Second Degree Burn Induced under Hypnosis; Montague Ullman, 828, May '47.
 Hypnosis in Treatment of Acute Combat Reactions; Fred D. Kartchner, and Ija N. Korner, 630, Mar. '47.

I

- Individual in Simpler Forms*; Arthur Russell Moore (R.), 720, Mar. '47.

Industrial Psychiatry:

- Current Trends in Industrial Psychiatry; Leonard E. Himler, 149, Sept. '46.
 Psychiatry in Hanford; Walter A. Noehrer, 200, Sept. '46.
 Psychiatry in Industry; Frederic W. Dersheimer, 145, Sept. '46.
 Review of Psychiatric Progress, 1946, Symp.; C. C. Burlingame, 549, Jan. '47.
 Institutional Treatment of Juvenile Delinquents; Leonard M. Dub, 818, May '47.
 Insulin Shock Therapy: See also Electrocshock Therapy, Shock Therapy.
 Insulin Therapy and its Future; Earl D. Bond, and Jay T. Shurley, 338, Nov. '46.
 Intelligence, Preliminary Test of; Margaret Keller, Irvin L. Child, and Frederic C. Redlich, 785, May '47.
 "It Can't Happen Here" (Ed.), 420, Nov. '45.

J

- Janet, Pierre (Ed.), 837, May '47.
 Japanese Military Psychiatry in Korea; Milton Miles Berger, 214, Sept. '46.
 Japanese Neuropsychiatry; Henry A. Cotton, Jr., and Franklin Ebaugh, 342, Nov. '46.
Jehovah's Witnesses; Herbert Hewitt Stroup (R.), 847, May '47.
Journal of Clinical Psychopathology (Ed.), 564, Jan. '47.
 Juvenile Delinquency: See Delinquency.

K

- Kasanin, Jacob S., 1897-1946 (O.), 287, Sept. '46.
 Knight, Dr. Robert P., Appointed to Austen Riggs Foundation (Ed.), 840, May '47.
 Kolb, Dr. Lawrence, Appointed Deputy Director to State of California (Ed.) 840, May '47.

L

- Langley Porter Clinic Refresher Course (Ed.), 123, July '46.
 Lasker Awards 1946 (Ed.), 426, Nov. '46; 840, May '47.
 Legislation: See also Forensic Psychiatry.
 Commitment of the Mentally Ill; Harold Rosen (Corresp.), 271, Sept. '46.
 National Mental Health Act, 417, Nov. '46.
 Leucotomy: See also Lobotomy.
 Orbital Cortex Syndrome following Leucotomy; F. Reitman, 238, Sept. '46.
 Levine, Dr. Maurice, Appointed to University of Cincinnati (Ed.), 565, Jan. '47.
 Lobotomy: See also Leucotomy.
 Prefrontal Lobotomy, Preliminary Appraisal of the Behavioral Results; Ward C. Halstead, Hugh T. Carmichael, and Paul C. Bucy, 217, Sept. '46.
 Long Island College of Medicine, Education at (Ed.), 128, July '46.
 Louis Gross Memorial Lecture (Ed.), 278, Sept. '46.

M

- Medical Education: *See also* Psychiatric Education.
Medical Licensure Examinations (Rypins'), 5th ed.; W. L. Biering (R.), 142, July '46.
- Medical Students:
 Psychiatric Factors in Medical Students Who Fail; R. W. Waggoner, and Thornton Woodward Zeigler, 369, Nov. '46.
- Memorial Lectures:
 Louis Gross Memorial Lectures, 278, Sept. '46.
 Salmon Lecturer 1946, Dr. David M. Levy, 278, Sept. '46.
- Men Under Stress*; Roy R. Grinker, and John P. Spiegel (R.), 138, July '46.
- Menopausal Women, Personality Studies in; Karl Stern, and Miguel Prados, 358, Nov. '46.
- Mental Deficiency (Review of Psychiatric Progress, 1946, Symp.); Leo Kanner, 535, Jan. '47.
- Mental Disease, Familial, in Private Practice; Abraham Myerson, 323, Nov. '46.
- Mental Health:
 Mental Health Program, Ohio (Ed.) 278, Sept. '46.
 National Mental Health Act (Ed.), 417, Nov. '46.
 National Mental Health Grants (Ed.), 711, Mar. '47.
- Mental Hygiene Appointments, Ohio (Ed.), 426, Nov. '46.
- Mental Hygiene in Buenos Aires (Ed.), 841, May '47.
- Mental Illness, A Study of the Modification of, by Intercurrent Physical Disorders; Hollis E. Clow, and Curtis T. Prout, 179, Sept. '46.
- Mesantoin, New Drug in Epilepsy Therapy; William G. Lennox, 159, Sept. '46.
- Meyer, Dr. Adolf, Eightieth Birthday (Ed.), 275, Sept. '46.
- Military Psychiatry: *See* Army, Army Air Force, Awards and Citations, Navy, Rehabilitation, Veterans Administration, World War, War.
- Japanese Military Psychiatry in Korea; Milton Miles Berger, 214, Sept. '46.
- Military Offenders at the Ninth Service Command Rehabilitation; Isidore I. Weiss, 172, Sept. '46.
- Psychiatric Aspects of Modern Warfare*; R. S. Ellery (R.), 574, Jan. '47.
- Review of Psychiatric Progress, 1946, Symp.; Winfred Overholser, 553, Jan. '47.
- The Selectee and His Complaints; William Rottersman, 79, July '46.
- World Wars I and II:
 Comparative Incidence of Neuropsychiatric Casualties in World War I and World War II; John W. Appel, Gilbert W. Eebee, and David W. Hilger, 196, Sept. '46.
 Psychiatric Experience in the War, 1941-1946; William C. Menninger, 577, Mar. '47.
 Psychiatric Lessons from World War II; Francis J. Braceland, 587, Mar. '47.
- Minnesota Multiphasic Personality Inventory and Cornell Selectee Index. A Rapid Personality Evaluation; Harry Grant, 33, July '46.

- Minnesota Multiphasic Personality Inventory in Clinical Practice with Notes on the Cornell Index; Herbert C. Modlin, 758, May '47.
- Modern Attitudes in Psychiatry*; The March of Medicine 1945 (R.), 715, Mar. '47.
- Modern Psychiatry*; William S. Sadler (R.), 846, May '47.
- Moore, Dom. Thomas Verner Moore, Testimonial Dinner (Ed.), 713, Mar. '47.
- Municipal Court of Philadelphia (1945)*, 32nd annual report (R.), 849, May '47.
- Murderer, The Unknown*; Theodor Reik (R.), 280, Sept. '46.
- Music:
 Psychoanalytical Approach to the Masculine and Feminine Principles in Music; Margaret Tilly, 477, Jan. '47.

N

- Nail Biting, Incidence, Allied Personality Traits and Military Significance; Joel Milam Hill, 185, Sept. '46.
- Narcosis:
 Brain Metabolism in Man; Unanesthetized and in Pentothal Narcosis; Williamina A. Himwich, Edmund Homburger, Robert Maresca, and Harold E. Himwich, 689, Mar. '47.
- National Health Agencies*; Harold M. Cavins (R.), 137, July '46.
- National Institute of Social Relations (Ed.), 130, July '46.
- National Mental Health Act (Ed.), 417, Nov. '46.
- National Mental Health Act, Grants (Ed.), 711, Mar. '47.
- National Society for Medical Research (Ed.), 273, Sept. '46.
- Navy:
 Conditioned Responses in Emotional Disturbances of War; Norbert Bromberg, 26, July '46.
- Nail Biting, Incidence, Allied Personality Traits and Military Significance; Joel Milam Hill, 185, Sept. '46.
- Oriental Stoicism; James Clark Moloney, 60, July '46.
- Psychiatric Casualties in Submarine Warfare; Ivan F. Duff, and C. W. Shilling, 607, Mar. '47.
- Negro:
 Mental Illness among Negro Troops Overseas; Herbert S. Ripley, and Stewart Wolf, 499, Jan. '47.
- Racial Aspects of Emotional Problems of Negro Soldiers; Rutherford B. Stevens, 493, Jan. '47.
- Neurology:
Practical Neurological Diagnosis; R. R. Glen Spurling (R.), 715, Mar. '47.
- The Neurologist's Point of View*; I. S. Wechsler (R.), 428, Nov. '46.
- Neuropathology:
 Cerebral Lesion Resulting in Spatial Disorientation; A. Z. Pfeffer, E. D. Friedman, and S. Bernard Wortis, 72, July '46.

- Men with Brain Damage; John A. Aita, 205, Sept. '46.
- Psychiatric Syndromes in Patients with Organic Brain Disease. I. Diseases of the Basal Ganglia; Charles Brenner, Arnold P. Friedman, and H. Houston Merritt, 733, May '47.
- Review of Psychiatric Progress, 1946, Symp.; Orthello Langworthy, and John C. Whitehorn, 515, Jan. '47.
- Neuroses: See Psychoneuroses.
- History of the Development of the Concept of Functional Nervous Disease during the Past 2500 Years; A. Warren Stearns, 289, Nov. '46.
- Neurosyphilis (Review of Psychiatric Progress, 1946, Symp.); Augustus S. Rose, and Harry C. Solomon, 524, Jan. '47.
- New Goals for Old Age*; George Lawton (R.), 141, July '46.
- New York:
- New York State Dept. of Mental Hygiene, Appointments (Ed.), 131, July '46.
- New York State Hospital, Buildings and Improvements (Ed.), 564, Jan. '47.
- Psychiatric Resources of New York; S. Bernard Wortis, and Morris Herman, 705, Mar. '47.
- O
- Obituaries:
- Dandy, Walter Edward (1886-1946), 143, July '46.
- Kasanin, Jacob S. (1897-1946), 287, Sept. '46.
- Tufford, Norman Grant (1896-1946), 432, Nov. '46.
- Occupational Therapy (Review of Psychiatric Progress, 1946, Symp.); Lawrence F. Woolley, 547, Jan. '47.
- Officers:
- The Paranoid Officer and the Officer Paraneer; Harold Rosen, and Hugh E. Kiene, 614, Mar. '47.
- Ohio's Mental Health Program (Ed.), 278, Sept. '46.
- Oriental Stoicism; James Clark Moloney, 60, July '46.
- Out-Patient Mental Clinics in 1946 (Review of Psychiatric Progress, 1946, Symp.); Horatio M. Pollock, 542, Jan. '47.
- P
- Pain Threshold:
- An Improved Instrument for Measuring Changes in the Pain Threshold Caused by Drugs; Frederick B. Flinn, and A. S. Chaikelis, 349, Nov. '46.
- Patients Have Families*; Henry B. Richardson (R.), 285, Sept. '46.
- People in Quandaries*; Wendell Johnson (R.), 848, May '47.
- Peptic Ulcers, Psychological Factors in Men with; Frederic T. Kapp, Milton Rosenbaum, and John Romano, 700, Mar. '47.
- Person in the Body, The*; Leland F. Hinsie (R.), 576, Jan. '47.
- Personality:
- Minnesota Multiphasic Personality Inventory and Cornell Selectee Index. A Rapid Personality Evaluation; Harry Grant, 33, July '45.
- Minnesota Multiphasic Personality Inventory in Clinical Practice with Notes on the Cornell Index; Herbert C. Modlin, 758, May '47.
- Non-Projective Personality Tests*; Harold A. Abramson, et al. (R.), 847, May '47.
- Personality Studies in Menopausal Women; Karl Stern, and Miguel Prados, 358, Nov. '46.
- Phenanthoin, Treatment in Epilepsy; Harry L. Kozol, 154, Sept. '46.
- Phobia as a Symptom in Hyperthyroidism; Fernard J. Ficarra, and Ralph A. Nelson, 831, May '47.
- Physical Disorders, A Study of the Modification of Mental Illness by Intercurrent; Hellis E. Clow, and Curtis Prout, 175, Sept. '46.
- Physical Signs of Schizophrenia; Theophil Klingmann, 69, July '46.
- Physiological Treatment of Psychoses (Review of Psychiatric Progress, 1946, Symp.); Joseph Wortis, 538, Jan. '47.
- Pi Lambda Theta Awards, 713, Mar. '47.
- Positions:
- American Psychiatric Association Psychiatric Placement Service, 566, Jan. '47.
- Boston, Mass., Residencies, Pratt Diagnostic Hospital, 842, May '47.
- Boston, Mass., Veterans Administration Training Courses, 565, Jan. '47.
- Dallas, Texas, Residency in Neuropsychiatry, 710, Mar. '47.
- Georgia, Psychiatric Posts, 710, Mar. '47.
- Huntington, West Virginia, Psychiatrist, Veterans Administration, 712, Mar. '47.
- Lansing, Michigan, Psychiatrist in Boys' Vocational School, 565, Jan. '47.
- Los Angeles, California, Psychiatric Director, 424, Nov. '46; Residency in Veterans Administration, 423, Nov. '46.
- New York, New York State Dept. of Mental Hygiene, Openings in Psychiatry and Psychology, 710, Mar. '47; School Psychiatrist, 424, Nov. '46.
- Portland, Oregon, Psychiatrist, Child Guidance Clinic, 840, May '47.
- Topeka, Kansas, Menninger Foundation, 564, Jan. '47.
- Washington, D. C.; Neuropsychiatric Consultants, Office of the Surgeon General, 713, Mar. '47.
- Western State (Pa.) Psychiatric Institute, Research Positions, 278, Sept. '46.
- Wichita, Kansas, Guidance Center, 710, Mar. '47.
- Prefrontal Lobotomy: See Leuotomv, Lobotomy.
- Pregnancy, Shock Therapy in Psychoses During (Case Report); Carol C. Turner, and Leonard D. Wright, 834, May '47.
- Presidential Address, May 1945; Karl M. Bowman, 1, July '46.
- Primitive Society, Rôle of the Aged in*; Leo W. Simmons (R.), 714, Mar. '47.

- Problems in Prejudice*; Eugene Hartley (R.), 847, May '47.
- Proceedings, American Psychiatric Association, 102nd Annual Meeting, Chicago, 249, Sept. '46; 381, Nov. '46.
- Psychiatric Aspects of Modern Warfare*; R. S. Ellery (R.), 574, Jan. '47.
- Psychiatric Case Study, Outline of*; Paul William Preu (R.), 282, Sept. '46.
- Psychiatric Clinics in United States, Directory (Ed.), 131, July '46.
- Psychiatric Education:
- Alumni Appraisal of Psychiatric Education; William C. Porter, and Henry A. Davidson, 440, Jan. '47.
 - American Board of Psychiatry and Neurology, Suggested Three Year Full Time Training Program for Psychiatrists (Ed.), 843, May '47.
 - Group Therapy in Teaching Psychotherapy; Samuel B. Hadden, 644, Mar. '47.
 - Psychiatry in Medical Education: The Teacher-Characteristics and Qualifications; John C. Whitehorn, 446, Jan. '47.
 - Review of Psychiatric Progress, 1946, Symp.; Charles A. Rymer, 556, Jan. '47.
 - Use of Private Patients for Psychiatric Teaching in a Medical School; Titus H. Harris, and John L. Otto, 649, Mar. '47.
 - What Should be Taught; Nolan D. C. Lewis, 450, Jan. '47.
- Psychiatric Foundation, The (Ed.), 563, Jan. '47.
- Psychiatric Nursing (Review of Psychiatric Progress, 1946, Symp.); Mary E. Corcoran, 544, Jan. '47.
- Psychiatric Personnel Placement Service to be Continued (Ed.), 566, Jan. '47.
- Psychiatric Primer for the Veterans' Family and Friends*; Alexander G. Dumas, and Grace Keen (R.), 429, Nov. '46.
- Psychiatric Social Work:
- Review of Psychiatric Progress, 1946, Symp.; Thomas A. C. Rennie, 545, Jan. '47.
 - Student Social Work Aides, New York (Ed.), 129, July '46.
- Psychiatry in Prospect; Robert H. Felix, 600, Mar. '47.
- Psychoanalysis:
- Character Analysis*; Wilhelm Reich (R.), 575, Jan. '47.
 - Hypnoanalysis*; Lewis R. Wolberg (R.), 845, May '47.
 - Psychoanalysis and the Unconscious (Corresp.); Henry J. Myers, 117, July '46.
 - Psychoanalytical Approach to the Masculine and Feminine Principles in Music; Margaret Tilly, 477, Jan. '47.
 - School of Applied Psychoanalysis (Ed.), 276, Sept. '46.
 - Sexual Revolution*; Wilhelm Reich (R.), 575, Jan. '47.
 - Will Therapy and Truth and Reality*; Otto Rank (R.), 136, July '46.
- Psychology: *See also* Tests.
- Individual in Simpler Forms*; Arthur Russell Moore (R.), 720, Mar. '47.
 - New Role of Psychological Testing in Psychiatry; Karl Menninger, David Rapaport, and Roy Schafer, 473, Jan. '47.
 - Non-Projective Personality Tests*; Harold A. Abramson, et al. (R.), 847, May '47.
 - Psychological Factors in Men with Peptic Ulcers; Frederic T. Kapp, Milton Rosenbaum, and John Romano, 700, Mar. '47.
 - Psychological Frontiers of Society*, 2nd Ed.; Abram Kardiner, et al. (R.), 283, Sept. '46.
 - Psychologist's Contribution to the Psychiatric Hospital; Charles O. Cheney, and Edward I. Strongin, 65, July '46.
 - Psychology of Seeing*; Herman F. Brandt (R.), 720, Mar. '47.
 - Psychology for Nurses*; Bess V. Cunningham (R.), 846, May '47.
 - Non-Projective Personality Tests*; Harold A. Abramson, et al. (R.), 847, May '47.
- Psychometrics (Review of Psychiatric Progress, 1946, Symp.); F. L. Wells, 532, Jan. '47.
- Psychomotor Attacks, Tridione in Control of; Russell N. DeJong, 162, Sept. '46.
- Psychosomatic Medicine:
- Psychosomatic Approach to the Problem of Stuttering in Psychotics; Dominick A. Barbara, 188, Sept. '46.
 - Psychosomatic Dermatological Syndromes in Military Service; Daniel J. Sullivan, and Eugene S. Bereston, 42, July '46.
 - Psychosomatic Diagnosis*; Flanders Dunbar (R.), 717, Mar. '47.
 - Review of Psychiatric Progress, 1946, Symp.; Nolan D. C. Lewis, 535, Jan. '47.
- Psychoneurosis: *See also* Neuroses.
- Effect of Anoxia Measured by the Electroencephalogram on Psychoneurotic Patients; Jacob E. Finesinger, Erich Lindemann, Mary A. B. Brazier, and Eliot D. C. Chapple, 738, May '47.
 - Electric Shock Therapy in Psychoneurosis; Donald M. Hamilton, 665, Mar. '47.
 - Psychoneurotics in Combat; Marvin R. Plesset, 87, July '46.
- Psychopathic Personality:
- Primary Behavior Disorders and Psychopathic Personality. II. Inheritance of Electrocutical Activity; Jacques S. Gottlieb, M. Coulson Ashby, and John R. Knott, 823, May '47.
 - Rorschach Patterns of 28 Cases; Keith D. Heuser, 105, July '46.
- Psychosurgery (Review of Psychiatric Progress, 1946, Symp.); Nolan D. C. Lewis, 535, Jan. '47.
- Psychotherapy:
- Brief Psychotherapeutic Interviews in Treatment; Oskar Diethelm, 806, May '47.
 - Pragmatic Psychotherapy in Military Training Centers; Bernard A. Cruvant, 622, Mar. '47.
 - Psychotherapeutic Aspects of Symptomatic Treatment; Jerome D. Frank, 21, July '46.
 - Psychotherapy for the General Practitioner, A Program for Training; Thomas A. C. Rennie, 653, Mar. '47.

R

Racial:

Mental Illness among Negro Troops Overseas; Herbert S. Ripley, and Stewart Wolf, 499, Jan. '47.

Racial Aspects of Emotional Problems of Negro Soldiers; Rutherford B. Stevens, 493, Jan. '47.

Regional Psychiatry:

New York, Psychiatric Resources: S. Bernard Wortis, and Morris Herman, 705, Mar. '47.

Rehabilitation: See also Veterans Administration.

A Veteran Uses General Semantics for Rehabilitation (Ed.), 133, July '46.

Rehabilitation of Military Offenders at the Ninth Service Command Rehabilitation Center; Isidore I. Weiss, 172, Sept. '46.

Residuals of Combat Induced Anxiety; Charles O. Sturdevant, 55, July '46.

Respiration during Electric Shock Treatment; Mark D. Altschule, Wolfgang M. Sulzbach, and Kenneth J. Tillotson, 680, Jan. '47.

Review of Psychiatric Progress, 1946 (Symposium), 513, Jan. '47.

Rockefeller Foundation, Annual Report, 1945 (Ed.), 425, Nov. '46.

Rorschach Test: See also Tests.

Clinical Application of the Rorschach Test; Ruth Bochner, and Florence Halpern (R.), 429, Nov. '46.

Psychiatric Screening Aid for Pre-Combat Troops; Oscar B. Markey, and Miles M. Zisson, 377, Nov. '46.

Psychopathic Personality, Rorschach Patterns of 28 Cases; Keith D. Heuser, 105, July '46.

Rorschach Courses at Michael Reese Hospital (Ed.), 713, Mar. '47.

Rorschach's Test as a Diagnostic Test in Brain Injury; John A. Aita, Ralph M. Reitan, and Jane M. Ruth, 770, May '47.

Situational and Attitudinal Influences on Rorschach Responses; Abraham S. Luchins, 780, May 1947.

Rypins' Medical Licensure Examinations; W. L. Bierring (R.), 142, July '46.

S

Salmon Lectures, 1946, Dr. David M. Levy, Lecturer (Ed.), 278, Sept. '46.

São Paulo:

A Assistência a psicopatas no Estado de São Paulo (Care of the Mentally Ill in the State of São Paulo); A. C. Pacheco e Silva (R.), 284, Sept. '46.

Schizophrenia:

Genetic Theory, An Analysis of 601 Schizophrenic Twin Index Families; Franz J. Kallmann, 309, Nov. '46.

Physical Signs of Schizophrenia; Theophil Klingmann, 69, July '46.

Transitory Schizophrenias Produced by Bromide Intoxication; Max Levin, 229, Sept. '46.

Science for Democracy; Jerome Nathanson (R.), 844, May '47.

Scientific Proof and Relations of Law and Medicine Master Index to the Symposium Series; edited by Hubert Winston Smith (R.), 286, Sept. '46.

Screening Tests: See Tests.

Selectee and His Complaints; William Rottersman, 79, July '46.

Semantics; See General Semantics.

Seton Institution (Ed.), 128, July '46.

Sexual Revolution; Wilhelm Reich (R.), 575, Jan. '47.

Shock Therapy: See also Electroshock Therapy, Insulin Shock Therapy.

An Evaluation of Shock Therapy; Leon Salzman, 669, Mar. '47.

Shock Therapy in Psychoses During Pregnancy (Case Report); Carrol C. Turner, and Leonard D. Wright, 834, May '47.

Situational and Attitudinal Influences on Rorschach Responses; Abraham S. Luchins, 780, May '47.

Sleeper, Dr. Francis H., heads Augusta State Hospital (Ed.), 276, Sept. '46.

Social Work: See also Psychiatric Social Work.

Salary Rates in Social Work (Ed.), 840, May '47.

Sociatry (Ed.), 712, Mar. '47.

Spatial Disorientation, Cerebra. Lesion Resulting in; A. Z. Pfeffer, E. D. Friedman, and S. Bernard Weiss, 72, July '46.

State Hospital School for Epileptic Children; R. L. Dixon, 811, May '47.

Stuttering in Psychotics, A Psychosomatic Approach; Dominick A. Barbara, 188, Sept. '46.

Submarine Warfare, Psychiatric Casualties in; Ivan F. Duff, and C. W. Shilling, 607, Mar. '47.

Symptomatic Treatment, Psychotherapeutic Aspects of; Jerome D. Frank, 31, July '46.

T

Tests: See also Rorschach Tests.

Comparison between the Neuropsychiatric Screening Adjunct (NSA) and the Cornell Selectee Index (Form N); Harry C. Leavitt, 353, Nov. '46.

Experimental Study of Mental Patients through the Autokinetic Phenomenon; Albert C. Voth, 793, May '47.

Minnesota Multiphasic Personality Inventory and Cornell Selectee Index; A Rapid Personality Evaluation; Harry Grant, 33, July '46.

Minnesota Multiphasic Personality Inventory in Clinical Practice with Notes on the Cornell Index; Herbert C. Modlin, 758, May '47.

New Role of Psychological Testing in Psychiatry; Karl Menninger, David Rapaport, and Roy Schafer, 473, Jan. '47.

Non-Projective Personality Tests; Harold A. Abramson, et al. (R.), 847, May '47.

Preliminary Test of Intelligence, A Brief Test of Adult Intelligence Designed for Psychiatric Examinees; Margaret Keller, Irvin L. Child, and Frederick C. Redlich, 715, May '47.

- Psychiatric Factors in Medical Students Who Fail; R. W. Waggoner, and Thornton Woodward Zeigler, 369, Nov. '46.
- Psychiatric Screening Aid for Pre-Combat Troops; Oscar B. Markey, and Miles M. Zisson, 377, Nov. '46.
- Wechsler-Bellevue Scales in an Overseas Hospital; Morton I. Teicher, and Erwin Singer, 91, July '46.
- Tridione in the Control of Psychomotor Attacks; Russell N. DeJong, 162, Sept. '46.
- Tridione, New Drug in Epilepsy Therapy; William G. Lennox, 159, Sept. '46.
- Tufford, Norman Grant, 1896-1946 (O.), 432, Nov. '46.
- Twins:
Genetic Theory of Schizophrenia; An Analysis of 691 Schizophrenic Twin Index Families; Franz J. Kallmann, 309, Nov. '46.
- U
- U. S. Public Health Service:
Psychiatry in Prospect; Robert H. Felix, 600, Mar. '47.
- V
- Veterans Administration: *See also* Army, Army Air Force, Military Psychiatry, Navy, Rehabilitation, World War I, World War II.
- Blind Veterans under Veterans Administration (Ed.), 842, May '47.
- Care and Treatment of the Psychiatric Patient in Veterans Administration; Harvey J. Tompkins, and Alfred W. Snedeker, 467, Jan. '47.
- Group Psychotherapy in Treatment for Veterans, 637, Mar. '47.
- Neuropsychiatric Disease in the Demobilized Veteran; Irving J. Burton, Merrill T. Eaton, Jr., and Herbert G. McMahan, 165, Sept. '46.
- Neuropsychiatric Program of Veterans Administration; Daniel Blain, and John H. Baird, 463, Jan. '47.
- Paraplegic Centers under Veterans Administration (Ed.), 839, May '47.
- Veterans Administration Mental Health Policy (Ed.), 277, Sept. '46.
- Veterans Administration, Neuropsychiatric Service (Ed.), 839, May '47.
- Veterans Administration News (Ed.), 839, May '47.
- War Neuroses*; Roy R. Grinker, and John P. Spiegel (R.), 138, July '46.
- W
- Wall, Dr. James H., Heads New York Hospital, Westchester Division (Ed.), 276, Sept. '46.
- War: *See also* Army, Army Air Force, Awards and Citations, Military Psychiatry, Navy, Rehabilitation, Veterans Administration, World War.
- Wayne University College of Medicine, Expansion (Ed.), 130, July '46.
- Wechsler-Bellevue Scales in an Overseas General Hospital; Morton I. Teicher, and Erwin Singer, 91, July '46.
- Western State (Pa.) Psychiatric Institute, Research Positions (Ed.), 278, Sept. '46.
- What People Are, A Study of Normal Young Men*; Clark W. Heath, et al. (R.), 280, Sept. '46.
- Will Therapy and Truth and Reality*; Otto Rank (R.), 136, July '46.
- World Wars I and II: *See* Army, Army Air Force, Awards and Citations, Military Psychiatry, Navy, Rehabilitation, Veterans Administration, War.
- Comparative Incidence of Neuropsychiatric Casualties in World War I and World War II; John W. Appel, Gilbert W. Beebe, and David W. Hilger, 196, Sept. '46.
- Psychiatric Experience in the War, 1941-1946; William C. Menninger, 577, Mar. '47.
- Psychiatric Lessons from World War II; Francis J. Braceland, 587, Mar. '47.
- Y
- Year Book of Neurology, Psychiatry and Endocrinology for 1945*; Hans H. Reese, Mabel G. Masten, Nolan D. C. Lewis, and Elmer L. Sevringhaus (R.), 139, July '46.
- Young Man, You Are Normal*; Earnest Hooton (R.), 430, Nov. '46.

AUTHOR INDEX

PART 2

- A
- Aita, John A.; Men with Brain Damage, 205, Sept. '46.
- Aita, John A., Reitan, Ralph M., and Ruth, Jane M.; Rorschach's Test as a Diagnostic Aid in Brain Injury, 770, May '47.
- Altschule, Mark D., Sulzbach, Wolfgang M., and Tillotson, Kenneth J.; Effects of Electrically Induced Convulsions upon Respiration in Man, 680, Mar. '47.
- Appel, John W., Beebe, Gilbert W., and Hilger, David W.; Comparative Incidence of Neuropsychiatric Casualties in World War I and World War II, 196, Sept. '46.
- Ashby, M. Coulson: *See* Gottlieb, Jacques S., jt. auth.
- B
- Baird, John H.: *See* Blain, Daniel, jt. auth.
- Barbara, Dominick A.; A Psychosomatic Approach to the Problem of Stuttering in Psychotics, 188, Sept. '46.
- Beebe, Gilbert W.: *See* Appel, John W., jt. auth.
- Bereston, Eugene S.: *See* Sullivan, Daniel J., jt. auth.

- Berger, Milton Miles; Japanese Military in Korea, 214, Sept. '46.
- Blain, Daniel, and Baird, John H.; The Neuropsychiatric Program of the Veterans Administration, 463, Jan. '47.
- Bond, Earl D., and Shurley, Jay T.; Insulin Therapy and Its Future, 338, Nov. '46.
- Bowman, Karl M.; Alcohol. Geriatrics (Review of Psychiatric Progress, 1946), 528, Jan. '47.
- Bowman, Karl M.; Presidential Address (1946) 1, July '46; Biographical Sketch, 18, July '46.
- Braceland, Francis J.; Psychiatric Lessons from World War II, 587, Mar. '47.
- Brazier, Mary A. B.: *See* Finesinger, Jacob E., jt. auth.
- Brenner, Charles, Friedman, Arnold P., and Merritt, H. Houston; Psychiatric Syndromes in Patients with Organic Mental Disease. I. Diseases of the Basal Ganglia, 733, May '47.
- Bromberg, Norbert; The Role of Conditioned Responses in Emotional Disturbances of War, 26, July '46.
- Bucy, Paul C.: *See* Halstead, Ward C., jt. auth.
- Burlingame, C. C.; Psychiatry in Industry (Review of Psychiatric Progress, 1946), 549, Jan. '47.
- Burton, Irving J., Eaton, Merrill T., Jr., and McMahan, Herbert G.; Incidence of Neuropsychiatric Disease in the Demobilized Veteran, 165, Sept. '46.

C

- Carmichael, Hugh E.: *See* Halstead, Ward C., jt. auth.
- Chaikelis, A. S.: *See* Flinn, Frederic B., jt. auth.
- Chapple, Eliot D.: *See* Finesinger, Jacob E., jt. auth.
- Cheney, Clarence, and Strongin, Edward I.; The Psychologist's Contribution to the Psychiatric Hospital, 65, July '46.
- Child, Irvin L.: *See* Keller, Margaret, jt. auth.
- Clow, Hollis E., and Prout, Curtis T.; A Study of the Modifications of Mental Illness by Inter-current Physical Disorders in 100 Patients, 179, Sept. '46.
- Cohn, Clarence: *See* Karlan, Samuel C., jt. auth.
- Corcoran, Mary E.; Psychiatric Nursing (Review of Psychiatric Progress, 1946), 544, Jan. '47.
- Cornsweet, A. C., and Hayes, M. F.; Conditioned Response to Fellatio, 76, July '46.
- Cossa, P.; Letter from France, 433, Jan. '47.
- Cotton, Henry A., Jr., and Ebaugh, Franklin G.; Japanese Neuropsychiatry, 342, Nov. '46.
- Cruvant, Bernard A.; Pragmatic Psychotherapy in Military Training Centers, 622, Mar. '47.

D

- Davidson, Henry A.: *See* Porter, William C., jt. auth.
- Davis, Jean P.: *See* Lennox, William G., jt. auth.
- DeJong, Russell N.; Further Observations on the Use of Tridione in the Control of Psychomotor Attacks, 162, Sept. '46.
- Dershimer, Frederick W.; Psychiatry in Industry, 145, Sept. '46.

- Diethelm, Oskar; Brief Psychotherapeutic Interviews in the Treatment of Epilepsy, 806, May '47.
- Dixon, R. L.; State Hospital School for Epileptic Children, 811, May '47.
- Dub, Leonard M.; Institutional Treatment of Juvenile Delinquents, 818, May '47.
- Duff, Ivan F., and Shilling, C. W.; Psychiatric Casualties in Submarine Warfare, 607, Mar. '47.

E

- Eaton, Merrill T., Jr.: *See* Burton, Irving J., jt. auth.
- Ebaugh, Franklin G.: *See* Cotton, Henry A., Jr., jt. auth.

F

- Felix, Robert H.; Psychiatry in Prospect, 60, Mar. '47.
- Ficarra, Bernard J., and Nelson, Ralph A.; Phobia as a Symptom in Hyperthyroidism, 831, May '47.
- Finesinger, Jacob E., Lindemann, Erich, Brazier, Mary A. B., and Chapple, Eliot D.; The Effect of Anoxia as Measured by the Electroencephalogram and the Interaction Chronogram in Psychoneurotic Patients, 738, May '47.
- Fitzpatrick, Charles P.: *See* Fitzsimmons, Laura W., jt. auth.
- Fitzsimmons, Laura W., and Fitzpatrick, Charles P.; A Program for Training Attendants in Mental Hospitals, 685, Mar. '47.
- Flinn, Frederick B., and Chaikelis, A. S.; An Improved Instrument for the Determination of Changes in the Pain Threshold Caused by Drugs, 349, Nov. '46.
- Frank, Jerome D.; Personal Problems Related to Army Rank, 97, July '46.
- Frank, Jerome D.; Psychotherapeutic Aspects of Symptomatic Treatment, 21, July '46.
- Friedman, Arnold P.: *See* Brenner, Charles, jt. auth.
- Friedman, E. D.: *See* Pfeffer, A. Z., jt. auth.
- Fry, Clements C.; Art in the History of Medicine. The 16th Century Cures for Lunacy, 351, Nov. '46.
- Funkenstein, Daniel: *See* Greenblatt, Milton, jt. auth.

G

- Gibbs, Frederic A.; Electroencephalography (Review of Psychiatric Progress, 1946), 512, Jan. '47.
- Gottlieb, Jacques, Ashby, M. Coulson, and Knott, John; Studies in Primary Behavior Disorders and Psychopathic Personality, 823, May '47.
- Grant, J. H.; A Rapid Personality Evaluation, 33, July '46.
- Grayson, Harry M.: *See* Manson, Morse P., jt. auth.
- Greenblatt, Milton, Funkenstein, Daniel, Miller, Daniel, and Rinkel, Max; Electroencephalographic Patterns from the Face of the Brain, 749, May '47.

Grotjahn, Martin; Experience with Group Psychotherapy as a Method of Treatment for Veterans, 637, Mar. '47.

H

- Hadden, Samuel B.; The Utilization of a Therapy Group in Teaching Psychotherapy, 644, Mar. '47.
 Halstead, Ward C., Carmichael, Hugh T., and Bucy, Paul C.; Prefrontal Lobotomy. A Preliminary Appraisal of the Behavioral Results, 217, Sept. '46.
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 Kirkpatrick, Barbara B.; *See* Walker, Charlotte F., jt. auth.
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 Korner, Ija N.; *See* Kartchner, Fred D., jt. auth.
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 Lindemann, Eric; *See* Finesinger, Jacob E., jt. auth.
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 Manson, Morse P., and Grayson, Harry M.; Why 2276 American Soldiers in the Mediterranean Theater of Operation were Absent without Leave, Deserted, or Misbehaved before the Enemy, 50, July '46.
 Maresca, Robert; *See* Himwich, Williamina A., jt. auth.
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 Merritt, H. Houston; *See* Brenner, Charles, jt. auth.

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 Miller, Daniel: *See* Greenblatt, Milton, jt. auth.
 Modlin, Herbert C.; A Study of the Minnesota Multiphasic Personality Inventory in Clinical Practice with Notes on the Cornell Index, 758, May '47.
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 Morris, Herman: *See* Wortis, S. Bernard, jt. auth.
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 Myerson, Abraham; Family Mental Disease in Private Practice, 323, Nov. '46.

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 Noehren, Walter A.; Psychiatry in Hanford, 200, Sept. '46.

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 Poucher, George E.: *See* Kessler, Morris M., jt. auth.
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 Prados Miguel: *See* Stern, Karl, jt. auth.
 Prout, Curtis T.: *See* Clow, Hollis E., jt. auth.

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 Redlich, Frederick C.: *See* Keller, Margaret, jt. auth.
 Reese, Hans H.: *See* Kant, Fritz, jt. auth.
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 Rinkel, Max; *See* Greenblatt, Milton J., jt. auth.
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 Robinson, J. Franklin; Use of the Residence in Psychiatric Treatment with Children, 814, May '47.
 Romano, John: *See* Kapp, Frederic T., jt. auth.
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 Rosenbaum, Milton: *See* Kapp, Frederic T., jt. auth.
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 Ruth, Jane M.: *See* Aita, John A., jt. auth.
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 Schafer, Roy: *See* Menninger, Karl, jt. auth.
 Shilling, C. W.: *See* Duff, Ivan F., jt. auth.
 Shurley, Jay T.: *See* Bond, Earl D., jt. auth.
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 Snedeker, Alfred W.: *See* Tompkins, Harvey J., jt. auth.
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 Strongin, Edward I.: *See* Cheney, Clarence O., jt. auth.
 Sturdevant, Charles O.; Residuals of Combat Induced Anxiety, 55, July '46.
 Sullivan, Daniel J., and Berenson, Eugene S.; Psychosomatic Dermatological Syndromes in Military Service, 42, July '46.
 Sulzbach, Wolfgang M.: *See* Altschule, Mark D., jt. auth.

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Voth, Albert C.; An Experimental Study of Mental Patients through the Autokinetic Phenomenon, 793, May '47.

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